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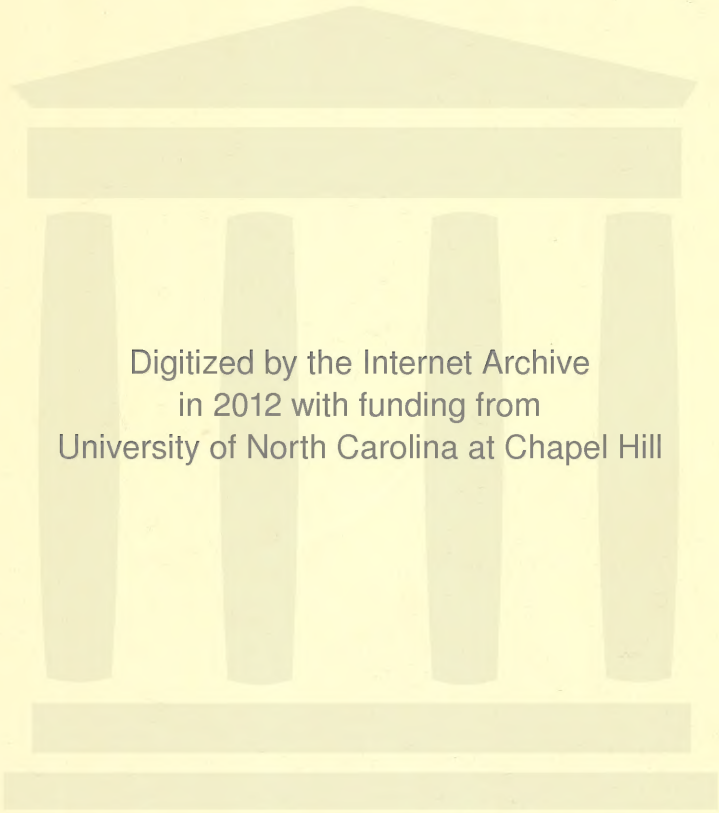
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VOL. I. No. I.

THE

Reconstructed Farmer,

A MONTHLY MAGAZINE,

DEVOTED TO

The Farm, the Garden, and the Household,

PUBLISHED AT

TARBORO', N. C.

MAY, 1869.

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN,
JOHN S. DANCY, - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattox.

VOL. 1.] TARBORO', N. C., MAY, 1869. [No. 1.

[From the New York Tribune.]

King Cotton.

Hardly a Southern paper reaches us but has editorial comment of some sort on the prospective crop of 1869. It is generally conceded that it will be large if the season is at all favorable. Some editors have the sagacity to see that saying so much about a great crop this year will have a bad effect on that part of the crop of 1868 which remains unsold.

Now, friends at the South, before your double plows have thrown all the land into ridges for cotton rows, take time and give this whole business of agriculture a sober second thought. You have just come out of a great war in which you were worsted. The weakest thing in the Southern military service during that war was its commissariat. A strictly agricultural people, having as much pride of acres as any landed aristocracy in the world, were from the first, and in all stages of a four years' strife, weakened, hampered, thwarted, demoralized, and finally defeated, for want of beef, corn, wheat hay and oats.

A great war is like a severe illness; it tries the constitution and unmasks the weakness of the system. The agricultural system of the South has been proved defective, because in a protracted fight the breach appeared there first. Now what is the great characteristic of planting? It is, and from the first has been, the deriving of a large income in clear money from a broad surface, by the sale of vegetable products. A small planter is one whose account sales of cotton or tobacco, rice or sugar, do not figure up more than $5,000. The sales of the large planters range all the way from $5,000 to $100,000. A few, a very few, Southern proprietors received over $100.000 from a single crop. That mode of deriving an income may have been connected with the character and status of the laborer, but such connection was not inseparable. A slave could cradle wheat or fatten hogs if ordered to, just as well as he could pick cotton or sucker tobacco. Slavery had inherent sins enough without charging it with blunders that were not, in the nature of things, inseparable from unpaid labor. From the time of Pocahontas the Southern domain was divided into large estates. Those who surveyed and plotted it felt as Brutus did about Cæsar's body.

"Let us carve him as a dish fit for the gods, not hew him like a carcass for the hounds."

These broad areas were cleared and cropped by sport-loving men, for whose ears the baying of a pack of fox hounds was sweetest music. Put a man with these tastes at the centre of a 1,200 acre tract, and what will he do? He will have as few inside fences as possible; he will make his money on a crop that will cost him the least time, or planning or worry. He will say, *dum vivimus, vivamus*—"after us the deluge." Talk to him of rotation, fertilizers, bone dust, the foot of the sheep having gold beneath it; he an-

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swers you by a blast on his hunting horn. "My niggers know how to make cotton." These seven words were the doom of true progressive agriculture south of Mason and Dixon.

The inducements that draw the southern agriculturalist toward cotton-fields are very great. He is in debt. He wants carriage horses to replace those which Bragg, or Johnson, or Lee broke down dragging cannon. He is living in a cabin and would like to do something with those ghostly and blackened chimney-stacks.—The saws of his gin stand are bent and rusty. His press is rude and slow. His mules are stiff, and his plows worn; his tobacco sheds went for camp fires. We admit that it would be a help on your place if you could sell 300 bales next December at two bits a pound. But let us reason about it. You do not propose to move West. You know of no good cotton or tobacco land that is cheapear than your own plantation. Besides, you have no money to go on. If you leave your children anything, it must be in the acres over which you walk. If you drain those acres of the last tun of potash and phosphorus they contain, you leave to those who come after you a wide waste of broom sedge and stunted pines—a heritage of briars and gullies, and rotten fences. No, gentlemen, you will be wiser and more provident than that. You will see that while there is some money in cotton and tobacco, there is in it little true wealth and power, little of that which makes nations great and keeps them so. The south has never been sufficiently devoted to the production of articles of prime necessity.—Mankind would be better off if frost or worms should destroy every tobacco plant that sprouts this spring. Cotton is a very important textile; but nations were clad, and well clad, before Eli Whitney was born. Agriculture means the *culture* of the fields; not skimming and desolating them. Enjoying the best climate and plowing the best soil on the continent, the southron ate imported bread, drank imported wine, gave his hands imported pork, shod them with imported leather, and buckled an imported saddle on the back of a horse that had traveled a thousand miles southward to find a purchaser When such a people went to war with States that fed and clothed them, the result was inevitable. Julius Cæsar with his tenth legion could have delayed that exchange of notes at Appomattox Court-House, but *he* could not have made it impossible.

In profound peace, with a strong, silent, vigilant man at the wheel, the country is entering upon a decade of material prosperity and development that will be more amazing than the magnitude and the obstinacy of the recent strife. What the South wants above all other things, is not disfranchisement or enfranchisement, or a man in the Cabinet, nor even a high price for good middling, but an agricultural system that is true, just and lasting. Her land has had no Sabbath; there has been no restoration. The balance between the living and the dead products of farming was destroyed and must be regained. No lands that are not often renewed by the mud of inundations can survive such an exhaustive succession as the planter has required of his cotton and tobacco fields.

A lost fertility must be restored. That savagery of broom-sedge and brier thickets must be abolished. But the purchase of a few thousand tons of guano will not work the desired change. Those phosphatic stones on Ashley river alone will not do it. The South thinks she needs manufactures—and so she does. But artisans and operatives will not move there till good food and good cloth are less costly. *These* will not be more abundant till there are more good barns and well-designed farm-yards; till those poor, wild cows are replaced with Durhams, and Herefords, and Alderneys; till those razor-back hogs are killed, and Suffolks and Chesters take their place; till they have fatter chickens and more of them; till potatoes, and cabbages, and apples are cheaper. Cotton always was a weak king. He was full of pride, and vanity, and weakness. He urged his subjects into an unequal strife, and then showed no influence at courts to make alliance or secure open ports. He gave the planter's family pocket-money, a handsome carriage, and a heritage of barren fields. If ever king at all, he was King Stork. The South of to-day does not need cotton factories half so much as she does manure factories.

Short Rules in Rural Economy.

1. Paint all tools exposed to the weather, and if with a light colored paint, they will heat, warp and crack the least in the sun.

2. Dip well-seasoned shingles in lime wash, and dry them before laying, and they will last much longer, and not become covered with moss.

3. In hitching a horse to a common rail or worm fence, always select the inside corner, which will be more secure by its bracing position, and the halter will not become tangled among the projecting ends of the rails, as when hitched to an outside corner.

4. Always tie a halter by making first a single loop and then thrusting the end of the halter through this loop. This is quickly untied, and will never become untied of itself.

5. Dip the tips of nails in grease, and they will easily drive into any hard wood, where they would otherwise double and break.

6. In screwing nuts into any part of machinery, in cold weather, be careful not to heat them first by the hands, or they will contract after being screwed on tight, and become immovable afterwards.

7. In ploughing or teaming on the road in hot weather, always rest the horses on an eminence, and where one minute will be worth two in a warm valley.

8. In setting out young orchards, always register the varieties immediately in a book, where they may be referred to in a few years when the trees commence bearing, and after the labels are lost and the names forgotten.

9. In laying out gardens for fruits and vegetables, place everything in drills or rows, so that they may be cultivated by a horse, and thus save the expense of hand labor.

10. Plant a patch of osier willows on every farm. A rod square will furnish as many bands for binding cornstalks, straw, &c., as an acre of rye straw.

11. Remove every stone from the track in the highway. A single projection, which might have been removed in one minute, has battered and injured a thousand wagons, at a damage equal to a hundred days labor.

12. When board fences become old, and the boards begin to come off, nail upright facing strips upon them against each post, and the boards will be held to their place, and the fence will last several years longer.

13. Always set a post fence over a ditch, or near good drainage, and the posts always remaining dry, will last many years longer than those standing in wet sub-soil.

14. In writing on wooden labels or marking sticks, with a common pencil, if the wood is first wet, the mark will last two years; if written on dry, one or two rains will wash it all away.

15. Always keep a supply of copper wire on hand, of different sizes, for repairing tools—it is greatly superior to either twine or iron wire.

16. Every farmer should have a neat tool room, against the smooth walls of which a suitable place should be provided for hanging up every tool. An accurate outline of each tool should be painted on the wall, to remind every man of its absence when left out of place.

17. Oil paint, applied to houses and barns, out-buildings and fences, will last much longer, and harden better, if put on as late as the middle of autumn, instead of during the heat of summer.

18. Every bin and granary should have a scale, or upright row of figures marked inside, showing accurately the number of bushels to fill it to each figure. This will enable the farmer to know at a glance how much grain he has raised, or has on hand.—*Rural Affairs.*

How to Destroy Ants.—Having seen some inquiries how to get rid of ants, I will say to such that a few years since I saw it stated in your paper that arsenic would kill them. Last year they were very troublesome in our pantry, and I put arsenic in sweetened water and set it in their way, and two or three days after there was not one to be seen. They have also troubled one of my bee-hives a few years past, and this year I put a dish of it on the ground, near the hive, and a few days after examined, and found none, and have seen none there since.—Asa Howes, *in Country Gentleman.*

Ditching and Manuring.

DITCHING.

An excess of water is hurtful in several ways: 1. It excludes the atmosphere; 2, it changes the mechanical condition of the soil; 3, it retards decomposition; 4, it renders the soil cold by evaporation; 5, the roots of many crops will not extend any deeper in the earth than the atmosphere penetrates, whilst other crops never mature if their roots reach the region of perpetual moisture; 6, it generates an acid or some other quality injurious to vegetable life.

As on the first point, it is a self-evident proposition, that when the earth is filled with water the atmosphere is excluded, for the atmosphere fills up all space which would otherwise remain unoccupied. The roots of the growing crops ordinarily descend to the depth to which the atmosphere is freely admitted, and on most soils that is determined by the plough. This is clearly illustrated by observing the field after heavy rains, when it will be discovered that the length of the roots is governed by the depth to which the earth has been broken. This is especially noticeable in the very narrow space in which the point of the cast plough goes deepest, for this space is entirely filled with the roots of the crop. One great object of ploughing is to admit the air into the soil; when the crop is clean and the soil has a slight crust, and is very soft beneath, I know of no other object for ploughing.

Secondly: It is almost purely a question of observation. Every planter has noticed hard bottoms become soft and friable by ditching; this is so generally known that it might be argued that all hard lands are owing to an excess of water. After having been thoroughly saturated for some time, portions of the earth are dissolved, and on drying become hard. So, while the water is present, the atmosphere is excluded, and as the water evaporates, the closeness and hardness of the soil continue to exclude the atmosphere.

Thirdly: It retards decomposition, and thereby renders the soil less capable of sustaining the growing crop. It is not known what length of time is required to decompose vegetable matter entirely submerged, for the atmosphere is the chief agent in decomposition, and every fact and argument that shows an excess of water excludes the atmosphere from the soil, equally tends to show that it retards decomposition. In illustration of this, it is well known that the compost heap may be put up so wet that fermentation will not take place.

Fourthly: It renders the soil colder by evaporation, and consequently the crop more backward. This may be well illustrated by placing a kettle of water over the fire for some minutes. The water is only slightly warm, if so at all, what has become of the heat applied to the kettle? It has been received by the water in a latent condition. In the spring of the year, while the heat of the sun would have been warming the soil, it is engaged in evaporating the excess of water. In our short seasons would it not be much better to drain the water off with the spade, for the surplusage must be disposed of by the sun or spade, before the soil becomes fit for cultivation.

"Fifthly: There are some soils in which the roots of the crop seem to be limited in their downward tendency by atmospheric influence. In freshly cleared land, which is imperfectly drained, it may be observed that the roots of corn descend to a certain distance with great regularity; it will then be ascertained that they cease their downward tendency at the point at which the water stood during the winter. And it may be announced as a proposition, so far as I know, universally true, that cotton never bears well when the tap root reaches the region of perpetual moisture, and this is one of the reasons why the cotton crop so often fails on swamp land. This is so often the case that in the opinion of many planters swamp land will not produce good cotton, but this is an assumption the contrary of which may be proved by experience.

"Sixthly: It is a well attested fact that some bottom lands which have been cleared, and also some which have not been cleared and poorly drained, will not produce a good crop the first year after draining. This is generally reputed to be owing to the acid condition of the soil. It

is not so clear what is the cause, but there is no doubt of the fact. Sometimes such land fails entirely under a liberal application of manure. I have noticed an instance of a bottom which had been turned out for several years; it was ditched and planted in corn the same spring; from a gill to half a gallon of cotton seed was applied to the hill to note the effect of the different quantities. The crop, in a good season, was a failure, and two-thirds of the bottom did not mature a single ear; the second year the some land produced a fair crop, and the third year a much better one. Such facts are sufficient to convince the planter of the paramount importance of a thorough system of draining. Often the deleterious effects of imperfect draining are so slow and gradual as to escape observation, and the premature sterility of a once good soil is charged to the weakness of the ground instead of the ignorance of the planter.

MANURING.

Here we approach the great question of manuring, for we cannot believe that the Creator intended that the earth should diminish in fertility by cultivation any more than he designed that the human race should linger and perish away from its surface. We go farther: unless the earth can be increased in fertility whilst being cultivated, famine and pestilence are the final destiny of man, for there is a certain ratio between production and population. So we must conclude that the Creator has provided ample means for the support of the human family; for a while, man may devastate the fairest portion of creation, but sooner or later he must yield to the laws of nature, and discharge these higher duties which every citizen owes to posterity. To support himself and family he is compelled to restore to the earth that fertility which in his pride and ignorance he had wantonly destroyed.

We have no means of computing the value of a proper system of manuring, whether as a source of national wealth or individual prosperity. It adds to the beauty of rural scenery, often restores health to the most sickly section by removing those causes which originate sickness; it substitutes activity for stagnation and plenty for want; it banishes sterility and clothes the barren field with waving corn. * * *

The greatest difficulty is in obtaining the materials with which to manufacture manure, and the question, with an air of incredulity, is often asked, how is it possible to manure from three to five hundred acres of land annually? Soil and subsoil constitute the great and illimitable supplies for manuring. I have never seen a soil, except, perhaps, some very coarse and sandy ones, which would grow any vegetable matter, that would not constitute a valuable element in the compost heap. Whilst using many varieties of soil, white sand itself becomes a valuable ingredient; sub-soils are often worth more than old soil cultivated incessantly for years. Perhaps in the future, the subsoil is to become the main supply. The surface of all uncultivated lands, and of lands too long cultivated, yields a fine supply, especially low or swamp lands. Sometimes it will be convenient to leave small branches and ponds in the field to haul their contents to the compost heap; the ditches are often deepened and widened with the same intention; the grasses which usually grow in ditches, are valuable for this purpose, especially on land long under cultivation. Every old field which produces broom-straw, especially when used with marl or ashes, by taking off the surface, makes a fine manure. This material, combined with some very sandy earth, yields the most remarkable result I have ever seen. Some old fields of very limited fertility, when treated with this preparation, produce remarkable crops of cotton; sometimes this compost surpasses the river mud with this crop. Fallow land yields much better material than the same land under the plough, besides being much lighter to haul. The effort has been made to use the same soil designed to be cultivated, but unless the land is new or lies fallow every other year, the heap soon fails. All soils and subsoils which may be fermented, and all vegetable matter which may be decomposed are valuable for compost.

In preparing for composting, it is advisable, especially when the material is rough, to hoe or plough it sometime in

advance, so that the atmosphere may be reducing it to a better condition. Rough soils and sub-soils, particularly those recently drained, are very much improved by freezing and thawing. Perhaps it would be of advantage to speak of the compost heap more particularly: the compost here spoken of is put up in the field. For the convenience of hauling in the spring, a heap is made in each acre, the material is thrown up with shovels as it is hauled in single horse carts; experience having shown that they are well adapted to hauling over cultivated land. The compost which is made in the summer is superior to that made in the winter. The heaps are broken up in the spring, and generally it is advisable to check the land so as to place the manure with more regularity; it is either placed in the drill or broad cast with the shovel. I shall consider the bulky material used as the mass of the heap and the other ingredients as stimulants or the decomposing elements. Haul together of the material designed to be used about one hundred and twenty-five loads, the load being five bushels. But if the coarse and apparently poor material is not made to undergo some change, the heap will be a failure; to accomplish this, we select some active ingredient which will produce fermentation, and thereby release the latent fertility of the material. In Edgecombe the agents generally used for this purpose are cotton seed, stable manure, marl, lime, ashes, and any vegetable matter easily decomposed, as the rank weeds growing about the ditch banks, and from twenty to thirty bushels of cotton seed to the heap.

In putting up the heap, place a layer of the material as thinly as possible, always remembering that the more thoroughly the soil and seed are intermixed, the more valuable will be the manure. If a supply of ashes or marl, or any other alkaline substance can be procured, it will make a valuable addition; the ashes, from fifteen to twenty bushels, marl from twenty to thirty, are to be sprinkled over the cotton seed. Formerly, the seed and ashes were kept apart as much as practicable, but experience showed a better result when they were kept together, for one great object of composting is to produce fermentation and decomposition, and the seed produce heat in proportion to the rapidity of their decomposition. Then let the mixture proceed as thoroughly as possible, until the heap is completed, with the top slightly rounding. The custom once obtained of putting up the heap in layers of seed and of earth without any effort to mix them, but this practice is now abandoned. When the seed are thrown up in layers, they are often black and mouldy, but if thoroughly mixed, it will be difficult to find a single seed when the heap is broken up. Whenever the seed appear in quantities, especially if partially stuck together, it is certain evidence that the heap has not passed through the proper change, for after fermentation and decomposition, the rough and hard material becomes soft and friable, and much lighter, and the seeds disappear.

After the cotton seed, stable manure and vegetable matter are exhausted, the composition is continued with marl or ashes alone, from twenty-five to thirty bushels of decomposed or disintegrated marl, and twenty to twenty-five of ashes are the quantities ordinarily used. For cold and stiff soils twenty-five bushels of pure stable manure, with the same quantity of material, make a more valuable heap than a like quantity of cotton seed. Where the materials can be easily obtained, it would be better in diminished quantities to use them all in the same heap. Some swamp soils, after having been exposed for some time, thrown up and allowed to decompose, act very finely without any stimulating ingredient whatever. Whenever lime, marl or ashes, or all together are used, it is advisable to add pine straw or any other vegetable matter which is easily decomposed, to the heap.

We may secure a limited supply of vegetable matter of great fertility, by sowing peas thickly on the ditch bank, or other material to be used; the vines and roots not only supply a fertile ingredient, but they aid in the decomposition of the mass of the heap by some solvent power perhaps peculiar to the pea.

It is necessary to note the fact, that some soils and sub-soils freshly thrown up, do not yield to this treatment, so safely and strongly are the latent elements of

fertility locked up. In illustration of this fact, there are many ponds and swamps abounding in fertility, yet they will not produce a crop the first year after draining. Such soils and sub-soils are generally spoken of as acid, without knowing the actual cause; when the soil is in this condition, the cotton seed are not thoroughly decomposed; they have become black and the hull hard. If it was purely an acid soil, would it not yield its acid in combination with lime, marl or ashes? yet such is not the fact. But when the same soil is exposed to the atmosphere, it becomes quite productive. May not this tend to show that the productive power of the earth is derived through the atmosphere? Should such unmanageable material be used in the beginning, it would have a strong tendency to confirm the belief that there is no peculiar advantage to be derived from composting.

How such results are brought about by composting, is a question for the learned to decide, and the only light we can afford on this subject is merely conjectural. Most lands by incessant cultivation will lose their productive quality, but by being worked only every other year, they would remain in good heart for a long time. Many, after being reduced by unintermitted cropping, may be compared to an over-worked animal, but they are only rendered unfit for present use. If this be not so, why does a few years' rest increase the fertility of worn-out land so rapidly? It is well known that incessant cropping alters the mechanical texture of soils, and as soon as this condition is brought about, the land begins to become closer, and the process is continued until the atmosphere is first partially, and then entirely, excluded from the soil. Incessant cropping does more damage by excluding the atmosphere than by removing the particles of fertility. Hence, we conclude, that the great supply of fertility in the soil, is in a latent condition, that is, in one not fit for the growing crop. If this is not so, why does land produce for such a series of years when cultivated only every other year? We suppose that the fermentation which takes place in the compost heap developes or liberates the latent fertility in the soil and sub-soil used, and thus, artificially, is produced the same result in a short space of time which it would take the atmosphere alone several years to bring about. It is in this way, we suppose, that the heap receives its increase of active fertility. Upon trial, there will be found many valuable supplies for compost on most plantations, which are unnoticed in the beginning of the system. It is a great mistake to suppose that only rich and valuable soils and sub-soils are fit to be composted; experience soon proves to the contrary; there are many ditches cut more for the materials for composting than for draining.

Some of the most unlooked-for results I have ever observed from composting, are from the use of a very sandy material; in many instances it is advisable to add sand to the heap. Hence, it may be conjectured, that the fermentation produces some nitrate or silicate of potash which is known to be a very valuable fertilizer. We would suggest that the soft granite met with in many sections of the State would be valuable, especially when pounded, to add to the compost heap to afford a supply of potash."—*Extract from an Address delivered before the North Carolina State Agricultural Society, by J. L. Bridgers, Esq., Oct.* 1857.

The Time to Cut Bushes.—A correspondent of the *New Hampshire Farmer* says: "Repeated trials on as many different pieces of land, and each trial a complete success, has convinced us that December, the time we invariably do this, is the best season, at which time the growth of the year is evidently at an end. A piece of valuable pasture land of ours, overrun with bushes, which had been many times cut over by a former owner to no purpose, because cut in the summer season, was by us cut over in December, 1862, and to this time, a period of nearly five years, not a bush has sprouted, and the land, though moist, is well stocked down to grass."

Soft soap should be kept in a dry place in a cellar, and not used until three months old.

She neglects her Heart who studies her Glass.

Hogs vs. Bugs.

For some time back the best and most scientific fruit growers in the West have been agreed, that practically there are but two methods universally available for fighting the plum curculio; namely: either 1st, by jarring the trees continually, or 2d, by allowing hogs the run of the orchard all through the summer months. The first method produces an immediate effect, because the "Little Turk" is thus arrested at once in his mischievous career, and prevented from stinging any more fruit. The second method is prospective in its effects, and operates chiefly through the hogs picking up all the wormy fruit as fast as it falls and thus preventing the larva of the curculio from going underground, and generating a new brood of curculio to sting the fruit at a subsequent period.

We propose in the following paragraphs, without at all undervaluing the first method, to demonstrate by plain, hard, practical facts, that the second of these two methods produces most gratifying results when systematically carried out for a series of years, even without any regular jarring of the trees. The only exception to be made is in the case of the cherry, which unlike any other stone fruit, does not fall prematurely to the ground when bored up by the larva of the curculio. Hence, so far as regards the cherry, we must depend entirely upon the jarring process to subdue this insect.

But the plum curculio and its allies are not the only insects that we can successfully attack through the instrumentality of the hog; neither is stone fruit the only crop that can be protected in this manner. For the last fifteen years or so, pip fruit, namely: apples, pears, and quinces, have been annually more or less deteriorated by the apple worm or larva of the codling moth boring into their cores, and filling their flesh with its loathsome excrement. Unlike all the snout beetles that infest stone fruit in America, this is an imported insect, which was originally, about the beginning of the present century, introduced from Europe into the East, whence it has gradually spread Westward into the Valley of the Mississippi. The facts which we shall presently quote prove that hogs are death upon this insect, as well as upon plum curculio, picking up the wormy apples as fast as they fall, and greedily devouring them without any squeamish misgivings as to the wholesomeness of their living inhabitants. It is not at all improbable either that hogs may pick up and devour the larva of the codling moth after it has left the fallen fruit, and while on its travels for the trunk of the apple tree. For instead of going underground, like larva of the plum curculio, this larva spins a cocoon above ground, and usually in the chinks of the bark of the tree upon which the apple that nourished it grew. Hence, as the apple worm is of some considerable size, some specimens being almost an inch long, a hungry hog would scarcely consider it "too small a business" to pick up and devour as many as could be found traveling along the surface of the earth.

To Find the Weight of Sheep.—A good way to ascertain the weight of a sheep that you wish to sell for mutton, is to take it alive and weigh it, and divide the amount by seven. Thus, a sheep that would weigh 140 pounds, divided by seven, would give twenty pounds dead weight, equal to the weight of a quarter, or eighty pounds for the whole mutton. the pelt and rough tallow would make about twenty pounds more, thus making what is called in the Boston market four quarters to the animal. Of course sheep poorly or extra fattened, will go above or below this average, but on the whole I ask our farmers to test it and see if it is not correct.

A grindstone should not be exposed to the weather, as it not only injures the woodwork, but the sun's rays harden the stone so much as, in time, to render it useless. Neither should it stand in the water in which it runs, as the part remaining in water softens so much that it wears unequally, "out of true."—*Ex.*

Rank animal manures are not so good in a garden as lime, salt, clay, and vegetable manure. Lime corrects acidity, makes mellow and sweet the garden stuff, and is good generally.

When is Tobacco Ripe?

This is, in truth, a simple question, and every one will answer it by saying, when it has arrived at, or attained to perfection. But the great difficulty is, to know certainly when that is—to understand the accompanying indications. To a novice, this *is* a difficult question, and will remain one until he has seen a specimen—a plant of ripe tobacco; then it is plain. As in many other plants, the ripeness of tobacco is known *principally by its color;* and it is no easy matter to describe, with absolute accuracy, any particular shade of color; but there are other signs accompanying, which have reference to the *general appearance* of the plant. With a little judgement and discrimination, the following rule will be found to answer. I will first observe that, all things favorable, tobacco can be *primed* and *topped* in six or seven weeks aftar planting; and may be *cut* in as many weeks, after topping, as there are leaves left on the stalk.

When a plant begins to ripen, it will gradually assume a "piebald" or spotted appearance. As the ripening advances the spots become more distinct and individualized. When the spots can be distinguished at the distance of ten steps, and the leaves of the plant turn down, become stiff to the touch, and their ends curl under, the plant is ripe, and should be cut. From the moment it has arrived at maturity it begins to decay.

CUTTING. — Remember that all the plants in your crop are to be *hung* after they are cut—hung *on* something, and *by* something. Prepare a knife—a butcher knife answers well—have it sharp—enter it at the top of the plant, where the top was broken off. Enter it centrally; press it downwards, dividing the stalk into two equal portions. Continue it downwards until within five inches of the ground. withdraw the knife, and cut off the stalk close to the ground. The plant is now cut. Lay it on the ground with the lower end towards the sun. The plants should be laid in rows as they are cut, in order to facilitate the labor of gathering them. There is one caution to be heeded in cutting tobacco, and that is, do not let it be burnt or *blistered* by the heat of the sun. In some varieties of tobacco this will be effected im one hour; in others, not so soon. But this danger can be evaded in two ways: first, by cutting late in the evening; second, by throwing it in the shade, or covering it so as to weaken the power of the sun. Some varieties of tobacco will wilt (that is, become soft or limber) in two hours; others, in a longer time, according to the degree of sunheat — *Tobacco Leaf.*

How to Destroy the Tobacco Fly.

A correspondent of the Louisville *Courier* thus describes the results of his experiments in destroying the tobacco fly, which we give for the benefit of those engaged in the tobacco culture:

Having, like all other tobacco planters, suffered for years by the ravages of this destructive and annoying insect, I proceeded to watch its movements and ascertain its habits. I found it intensely fond of sucking at the bloom of the Jamestown, more generally speaking the "Jimson" weed, wild morning glory, etc., but espccially the former. Accordingly, at the time of setting out the plants, I set out among them some eight or ten "Jimson" plants, which, like all other evil weeds, grew up and bloomed just in time for the objects of this cuss of an insect. I procured from a druggist about an ounce of pulverized fly powder, or fly stone, mixed it with water, making it very sweet with honey (sugar or molasses will do as well) put it in a half-pint bottle with a cork stopper, into which I inserted a goose quill. Thus armed and equipped, I went every evening between sunset and twilight and dropped about three drops of the mixture into the bloom of the "Jimson," and the next day would pick up handfuls of the insects lying dead under the nearest trees, or in the corn field closest to the tobacco patch.

FOOD FOR CHICKENS.—A writer recommends for chickens, for the first week after hatching, hard-boiled eggs, to be given, chopped fine, at least twice a day, wheat steeped in milk, and coarse Indian meal, bread crumbs, etc. A change of food is necessary twice a week, substituting cracked corn for wheat.

Topping and Suckering.

Topping is done to throw the strength, which would go to develop seeds, into leaves. It must, therefore, be done as early as the seed-buds show themselves, if not earlier. This work *must* be done, and the question is how to do it. If there are but few leaves on the plant, even these will not ripen if it is not topped; if there are many, then the grower has the choice either to break off the flower-stalk only or to take one or more leaves also. This should be done in answer to the questions: 1st. Is there time enough to ripen even the upper leaves fully? and, 2d, Are the plant and soil strong enough to ripen all leaves, even the upper ones? The answers to these queries will decide the way of topping. If yes, he takes off the flower-stalk only; if no, he tops to eight, ten, twelve, fourteen, or sixteen leaves, according to his judgment—that is, he allows so many leaves to remain on the plant. Here will be seen the importance and benefit of starting the plants early from seed. This alone may increase the yield one half.

Suckering follows shortly after topping, and is done for the same reason—to concentrate the strength of the plants in the leaves A sucker is a little branch appearing at the place where the stem of the tobacco-leaf joins the stalk. They draw off nutriment, while they will never be good for anything, and therefore must be removed. This is one of the tiresome operations in tobacco culture, for these suckers do not all appear at the same time; they first appear on the lower leaves, and then on the middle, and lastly at the top leaves. They even push out again sometimes after they have been removed. They demand the planter's whole attention, and he has no rest on account of them, until the plant is fully matured.

Interesting to Tobacco Planters.

Some time since, in looking over your very welcome paper, my eye fell on a communication from "Upper Falling," on the subject of raising tobacco by the use of salt alone. I feel much interested in this matter, as it will, to a great extent, curtail the expense of raising that crop, the only one to which we farmers can now look to bring us any of the article now most scarce and needful to us—money. Having had some experience with the use of salt for tobacco, and wishing to contribute my aid and experience for the benefit of my brother farmers, I, by request, write you this, giving my endorsement, at least in part, to "Upper Falling." I used in 1860-'61 alum salt (that being much cheaper than the Liverpool) in the following manner: In the month of March I applied from two to two and a-half bushels of salt to the acre on a Fall or Winter fallow, allowing it to remain exposed on the surface until some time about the last of April, or first of May, when, after applying my other manures—stable, or farm pen, or guano, or superphosphates, as the case may have been, the land was prepared for the planting of the crop. The salt in this time had become saturated in the earth and did not interfere with the living of the plant, which I feared, if applied at a later date. But from "Upper Falling" I was mistaken in that as he applied it heavier and at a much later date than I did, with no bad effect. My observation was that my crop those two years was interfered with scarcely at all by the cut worm (a very troublesome fellow ordinarily) and more especially was not affected, in the least (where the salt was applied) by fire, whilst in one of the above-named years my neighbor's crop in a field adjoining mine, and his on high land and mine on the creek flat, was entirely ruined by fire. I can't say the salt added anything to the growth of the tobacco, for I used freely other manures, just as I would have done had I not put the salt there. I knew in another neighborhood four large planters, two of whom used salt with the same result as mine, whilst the other two living between those that had used the salt, had their crops almost totally ruined by fire. With these facts coming under my own observation, I can with confidence endorse "Upper Falling" as to a preventive of fire, but will not undertake to say as to the fertilizing properties of salt, but will give it a fair trial next spring, Providence permitting.—*Cor. Lynchburg News.*

The Mineral Wealth of the State of North Carolina.

Very few men give themselves the trouble to think, understandingly, of the immense mineral wealth of our State. At least ten thousand men could be profitably employed within her borders, delving for the rich treasures which underlie her surface, if the attention of capitalists could only be turned in this direction. We are credibly informed that at the copper mines of Jackson and adjoining counties alone, it requires from forty to fifty wagons and teams daily to haul the rich ore to the railroads for shipment, when the mines are properly worked; and the mines already discovered on this side of the mountains are said to be equally rich. They cannot be worked, however, because there is no coal in their vicinity for smelting purposes, and to haul the ore to a railroad would ruin the profits. Once the road is completed through the mountains, these rich ores, as well as others, which the keen eye of the mineralogist would soon discover, will be shipped down to the coalfields in Chatham county, probably to Greensboro', to be smelted and prepared for market. In addition to copper and other finer metals, the mountains in this State abound in mines of iron ore, than which perhaps none is richer on the continent. These massive beds of mineral wealth are so far removed from water or railroad transportation that the working of them cannot pay until transportation is supplied. When this is done they will at once become great sources of wealth to the State as well as those who may be so fortunate as to own and work them. Even the immense quarries of marble, than which none on the continent is finer, which this mountain road will penetrate, would, in the course of time, almost pay for building the road. Strange as it may seem, portions of our mountain country, equally rich in mineral wealth, and surrounded by civilization for the last fifty years or more, have been less explored and are less known to mineralogists and miners generally, than the Rocky Mountains of the far off West, where the buffalo, bear, panther and Indian still roam together in their native wildness and ferocity. Why is this? We know no reason but the tardiness of our people in penetrating those mountain regions with the fiery steed, and thus opening up the way for enterprise and commerce.

North Carolina, it seems, has been particularly unfortunate. She has been, ever since our earliest recollection until within a few years past, trying to get communication from the coalfields to the outer world, and yet, she has never succeeded. She has spent money enough, first and last, on the Deep river navigation, to build a railroad half way round the State, all to no purpose, and now, for the last, we do not know how many years, our people have been pecking away at a railroad from Raleigh to the coalfields, and it has not been completed yet.

Well do we deserve the appellation of "Old Rip Van Winkle." It is high time that we should wake up from our lethargy, invite labor and capital into our midst, and make us a State of which we shall be truly proud.—*Newbern Times.*

Manuring Trees.—It is a mistaken notion that farmers have got into their heads of applying all the manure close up around the foot of the trees. The roots run of for a long distance, whence they obtain but slight nourishment. Plow to a slight depth around the trees, in a circle, say from eight to ten feet, and apply well-rotted barn-yard manure and carefully dig away the dirt around the base of the tree, and see if the borers are at work. If so get a small piece of wire and probe the wound and it is quite likely you may hit the worm, if so, see that you probe it out, and then apply some wood ashes around the base and carefully replace the earth, and you will see new vigor infused into these barren scrubby trees.

It is said that strawberry plants come from the third and fourth sets of runners, and that the first and second sets should be cut off.

Calomel, mixed with corn meal, will cure cholera in chickens.

Hints for Farmers.

It is not what we make, but what we *save*, that makes us rich.

In looking around among my brother farmers, I notice many things wherein there might be greater economy in my opinion.

In turning cattle out late in the fall, when the ground is soft, to be tramped upon.

In letting cattle stand in an unsheltered yard in cold, stormy weather, when there is room in the stable for them.

In throwing their fodder in the yard to be tramped under foot, instead of feeding it in racks.

In not having water in the yard for the cattle, in place of driving them through snow and all kinds of weather to the creek, thereby losing more in manure during a year, than the interest of what it would cost to bring the water in the yard, to say nothing of the convenience.

In not having a house for poultry to roost in and save their drippings; the value of the latter from one hundred fowls, in one year, would pay the cost of the building, not counting the advantage it would be to the fowls.

In not having a wood-house to cut in, in rainy days, and store up dry wood.

In leaving potato vines, weeds, &c, go to waste, instead of hauling them to the hog-pen, to be worked into manure.

In riding about and leaving the management of the work too much to hired help.

And last, but not least, in sending their children to school a day or two in each week, and allowing them to play and loiter about the rest of it.

How to Break a Mule.

The following suggestions about breaking the mule are from a new and interesting book on the subject, by Harvey Riley, Esq., Superintendent of the Government corral, Washington, and published by Dick & Fitzgerald, New York:

"Don't fight or abuse him. After you have harnessed him, and he proves to be refractory, keep your own temper, slack your reins, push him round backward and forward, not roughly; then if he will not do what you want him to, tie him to a post, and let him stand there a day or so without food or water. Take care, also, that he does not lie down, and be careful to have a person to guard him, so that he does not foul in the harness. If he does not go after a day or two of this treatment, give him one or two more of it, and my word for it he will come to his senses and do anything you want from that time forward.

"The only way to keep a mule from kicking you is to handle it a great deal when young, and accustom it to the ways and actions of men. You must, through kindness, convince it that you are not going to harm or abuse it; and you can do that best by taking hold of it in a gentle manner every time it appears to be frightened. Such treatment I have always found more effective than all the beating and abusing you can apply. The mule is peculiar in his dislikes. Many of them, when first harnessed, so dislike a blind bridle, that they will not work in it. When you find this, let them stand for a day or so in the blinders and then take them off, and in forty-nine cases out of fifty he will go at once."

VALUABLE.—The following is said to be a sure preventative against the fly on the tomato, when transplanted from the hot-bed: A twig of the "old field pine" stuck in the ground on the south of the plant, and just large enough to shade it, bending north. Let the pine remain until the tomato assumes a vigorous growth, then remove it.

Tobacco, after being dried in an oven or warm sun, then rubbed very fine, and applied to squashes, melons, &c., is certain against the striped bug. Of course a renewal must be made after every rain.

Try both recipes—they are simple and can do no damage.

WARTS ON COWS.—Noah Whipple, Jr., says in the Boston *Cultivator*, that warts on cows teats may be readily removed by washing frequently with alum water made by dissolving two ounces of alum in a pint of soft water.

Does it Pay to House and Care for Farm Implements?

A question in which all farmers who use and own farm implements are, or ought to be interested. How often is it we see the farmer spend money freely in procuring improved farm implements, whereby much human labor of cultivating the farm is saved, and when once procured, for a short time they are carefully used and cared for, but soon the novelty is worn off, a hurry or other excuse is made, and they are left uncleaned, "just this once," or out in the rain a day or two, and thus it grows gradually till the implements are regularly left where they were last used till wanted for use again. What is the result of such a course to the tools? An exposure to the sun shrinks, cracks and warps the wood work; rains, dews and dampness swell the wood and rust the iron, causing decay, making the tool liable to break, or at all events weaken it.

Such tools are disagreeable to work with, and if taken for use, time, which is money, is taken to clean or put them in order before they can well be used.—Now a few moments lost, just as we are going in a hurry into the field, may not, perhaps, be felt much for the present, but when these occurrences are oft repeated, in the aggregate they amount to quite a little sum, aside from the extra wear of the implement, and the extra muscle wasted in its use.

Let me take my position more clear and familiar by taking this mowing machine which neighbor R. owns. Some four or five years since he purchased it, paying therefor $125. While using it at first, he was careful to keep the bearing parts well oiled, and the cutter in good order, so that it performed good work; but in his hurry soon it was a trouble for him to clean it, and put it under cover after using it for a day, or after finishing the piece of mowing; so he unhitches his horses and leaves it out. At night comes up a rain, and perhaps it last several days; the machine stands out, and when it comes off, he wants it to use again; some half an hour or more time is taken to clean and put it in fair working trim; he goes to work—the machine does not perform as well as before, and more time is taken to find and remedy the cause, if possible. Thus matters go on from day to day—the machine wears fast, and soon looks like an old one; at the end of five years, after being carefully cleaned and stored, in that capacious store-house where so many implements, stock, &c., find shelter, the machine is used up and thrown aside; and another $125 is required to replace the machine, to be similarly used up.

Neighbor A. purchased a machine of the same make, and at the same time as R.; has used it to cut more grass annually than R., and after using, it is carefully cleaned and stored in his tool-house; the wood-work has been repainted once, and the iron and cutter kept free of rust by cleaning and coating with oil or lard before being laid away for the season; and in a day or two it was wiped bright and clean. To-day A.'s machine looks as if it would stand another five years' service, and do it with the same ease and economy as the first service; all the wood-work and other parts are perfect, except a little natural wear. A's machine is always ready for service, without any time being wasted in putting it in order before going to the field, and when being used, it works much easier than R.'s.

So you will see that at the end of ten years, A. will have paid out $125 for one machine, and a few dollars only for repairs, while R. will have used up two, costing, aside from the extra interest, and time in repairing and putting his machine in working order, $250. Now who believes that it cost A. $125 for taking a little care of, and in housing his machine for the five years? No one, of sound judgment and of observing mind, I opine.

What is true of the mowing machine, is also true of all farm implements, carts, wagons, plows, harrows, rakes, shovels, hoes, cultivators, &c.; all need shelter, and an occasional coat of paint to the wood-work, aside from having their bright iron surfaces coated with oil or lard when laid away, and at all times being used, to be well cleaned before put up.—*Albany Cultivator.*

On the Importance of the thorough Education of those Men whose Business it is to Cultivate the Soil.

Of all human pursuits, agriculture is indisputably the most important. That art which underlies the whole fabric of society, supports and preserves from death more than a thousand millions of human creatures and employs in its vital work more than five-sixths of the fixed capital of the civilized world, is surely entitled to primary consideration, and justly challenges the earnest fostering care and attention of the science and legislation of all lands. But, despite the universally acknowledged importance and vital interest of the work of the husbandman, and the fact patent to all well informed minds, that no department of human knowledge affords a wider or richer field of intellectual labor, the cultivation of the soil has been doomed to subsidiary consideration in the schools and councils of all nations. Only within the last half century, have any public and efficient measures been taken in acknowledgment of the dignity and importance of this fundamental art. It is more than astonishing that Europe, which has a civilization, and a written history reaching back more than two thousand years, has established and endowed schools and colleges, to teach men to plough the oceans and seas, number, measure and weigh the stars, to make and administer laws, practice medicine, preach the gospel, and read and speak the languages of the living and the dead; and yet until a very recent period has almost wholly neglected or ignored that art upon which all the rest depend.

Previous to the reading of Professor Johnston's Lectures to the Durham County Agricultural Society, and the members of the Durham Farmers' Club, no British College or University had incorporated in its curriculum of study special instructions in husbandry. Indeed, before Sir Humphrey Davy in 1812 read his lectures before the Agricultural Board, no effort had been made by the learned men of the nation to impress upon the public mind the importance of the study of the Natural Sciences in their bearings upon the cultivation of the soil. From that period to 1840, it is but just to say, that a few refined and noble minds not only saw and acknowledged the high importance of this subject, but with all the force of superior learning and the prestige of their names urged it upon public consideration. Lord Dudley in his letters to the Bishop of Llandaff, heartily laments as "mistakes of his early life, his unacquaintance with the rudiments of Agriculture, his ignorance of Botany and Geology."

Since 1840 quite a number of agricultural chairs have been connected with the Colleges of Great Britain, and a sound and elevated agricultural literature has sprung up, and spread itself over the Kingdom, and if we may fully credit the statements of the English press, their salutary influence upon every interest of the country has been little less than magical. It has been left, however, for the Continent to demonstrate the great importance of a high standard of Agricultural education. Near the close of the last century Baron Von Fellenberg established a strictly Agricultural School in Switzerland, and the present improved condition of that interesting country in Agriculture, Horticulture, and Home Manufactures, is a standing, overwhelming vindication of the transcendant importance of the thorough education of these men whose business it is to cultivate the soil.

An intelligent physician from that country assured me a few years since, that two-thirds of the Swiss Cantons had increased in actual value to a fabulous extent in the last thirty years, and that the public sentiment of the country accorded in the main the credit of this improvement to the liberal education, and consequent elevation of the masses.

Early in the present century, a private Forestry School was established at Tharandt, in Saxony, which in 1816 was transferred to the State authorities, who in 1830 converted it into an Agricultural College. In 1818, the great Agricultural College of Europe was established at Hohenhein, near Stuttgard in the Kingdom of Wurtemburg—and in 1835, a similar institution was established at Eldena, Pomerania.

Now it will be seen that these three public institutions originated in the pres-

ent century, and it will be interesting to inquire somewhat into the history, present status, and influence of these schools upon the countries in which they are located. The unprecedented success of these institutions is, perhaps, the strongest argument in their favor, and should tend more than anything else to encourage individuals and States to embark in similar enterprises. Hohenhein, alone, has educated nearly three thousand men in the specialties of the establishment; nor has the progress of the other two been less encouraging. The general thrift, in the main attributed to them in the countries where they are located, is not the only argument in their favor; they have originated, doubtless in great part under their influence, 141 agricultural stations, institutes, schools, and colleges, all in the countries they represent.

These are all represented by parties in every way competent to form correct opinions on this subject, as being in a growing and prosperous condition, and as exerting a most salutary influence upon all the material interests of these countries.

In 1780, Germany exported scarcely any of the products of her soil and toil except wine, now she exports almost every agricultural product, in large and increasing quantities, not excepting Tobacco.—We were astonished but a few months ago, at a published estimate of the prodigious amount of German tobacco inspected in the markets of the world.

Within the period alluded to Germany has not only marvelously increased her agricultural products, and the vigor and efficiency of the related arts, but nearly quadrupled her population. These are historic facts which cannot be gainsaid, and are referred to by all intelligent thinkers as the legitimate results of her thorough and comprehensive system of agricultural education. There is but one opinion in Europe on this subject, and as a result nearly all the States of that country are moving in the great work. Even Russia, acting upon the suggestions of Sir Roderick Murchison, is taking the incipient steps towards a living, productive system of education. The spell which has bound the Old World for 2,000 years to its artificial and inoperative systems of education has been broken, and light has been reflected down upon the masses who hold the key to the earth's rich treasures, and they are pouring forth these stores to bless the world with plenty, peace and prosperity.

How to Saddle a Colt.

"Let the stirrup-straps be tied up in loose knots to make them short, and prevent them from flying about and hitting him. Double up the skirts and take the saddle under your right arm. When you get to him, rub him gently with the hand, then raise the saddle slowly until he can see it and smell it. Now let down the skirts and rub them gently against his neck, the way the hair lies, getting it a little further back each time, until you can slip the saddle over his shoulders on his back. Shake it with your hand, moderately at first, and in a few minutes you can move it about over his back as much as you please, and take it off, and throw it on again, without his paying much attention to it. Having accustomed him to the saddle, you may fasten the girth.—This requires caution at first, as the colt is often frightened when he feels the girth drawing the saddle and making it fit tight on his back. On this account the girth should be drawn only so tight at first as to just hold the saddle. After moving him a little with the saddle in this condition, the girth may be drawn as tight as you choose. The animal may now be walked about the stable a few times, your right arm resting on the saddle, and your left holding the reins on each side of the neck, and guiding him as you wish. In this way he will soon become accustomed to the saddle and the bridle, and you can turn him about or stop him at pleasure.

To make an amusing and sympathetic ink, mix lemon and onion juice. Writing or pictures made with this mixture on plain white paper, will, when dry be invisible. But on warming the paper before a fire, the lines will appear in brown tints. Very pretty effects may be thus produced.

On an average, the cotton-planter who makes sixty bales uses up the proceeds of forty bales to buy what he ought to raise.

[For the RECONSTRUCTED FARMER.

The Reconstructed Piggery.

MESSRS. EDITORS:—My plan of raising pigs according to the new or reconstructed plan is, have them in a very convenient place where the eye of the owner can often see them, and instead of feeding once a day as of old, feed and count them three times a day. By doing this, your pigs will thrive and grow to be fine and fancy, and will be so manageable that you can handle and control them as you please.

To keep the thieves away, you may put them under a lock and key at night without much trouble. My neighbors say it will not do to keep them so nice and tempting, somebody will steal them in the daytime. You must look out for such thieves and make them understand that if caught in such an attempt they will surely be punished by law, by hook, or by crook. Be sure they *understand* and *believe* this, and you will not be in much danger of having your pigs stolen.

Can hogs be raised profitably? To a limited extent they can. By feeding on cooked vegetables, with a small quantity of meal added, they can be raised cheaply, but beyond this they cannot; you can buy mess pork cheaper.

If your pigs are to be fed on unground food, it should be soaked in water, with a little salt added; if it should be ground, cook it with a good supply of salad from the garden.

Your pig-pen should be well littered with swamp muck or woods mould once every two weeks, and as often supplied with a new bed; such treatment will keep them clean and not allow them to become mangy.

If they become lousy, rub them with kerosene oil, and the lice will disappear.

Your shoats for your pork next winter should be now put in a lot where they can be well supplied with water and be well fed on cooked vegetables from the garden. When your oats begin to show signs of pointing, let your shoats run on them; fence off a small place, and when they eat them off pretty close, move your fence and give them more of the green oats. Return them to their lot at night; this lot should be well covered with good, rich earth from the swamp, fence or wayside.

In this way you can raise a limited supply of pork cheap; but according to the old plan of keeping your pigs so poor as not to tempt a hungry thief, you cannot raise pork profitably; you can buy cheaper. Supposing there are a great number of persons who do not wish to part from the old method of keeping frames and shadows of pigs and shoats, I would like to tell them that their pork costs them more than it is worth, and such pigs are always in somebody's field or way—in short, they are a nuisance.

You should now keep the best, and no others; such as will fatten well, whether old or young. Your breeders should not be allowed to grow old, for they become spiteful, and often eat their own pigs, and also others. I think breeding from old hogs has a good deal to do with the diseases of hogs.

To you who wish to follow the old plan, I advise you to let your hogs run in the woods and feed them as formerly, giving each hog one small ear of corn a day; keep them out of sight as much as possible, and be certain you do not know or care how many you have; when whortleberries come, some of them may possibly be fat enough to tempt a thief, and my word for it, you will never see them again.

I would advise all persons who wish to purchase hogs that will live on the wind and keep so poor as not to tempt a thief, to apply to M. Goldsboro, of Baltimore, Md.

JOHN STATON.

EDGECOMBE CO., N. C., Apr. 1, '69.

Feeding Hogs.

A practical farmer, of Chester county, Penn., gives, in the Germantown *Telegraph*, his method of feeding hogs, and the results of his observations. We extract the following from his article :

I would name fifty per cent. instead of twenty-five as the difference between letting pigs feed themselves and feeding them in a proper manner—between letting them grind their own corn and having it done for them.

For feeding purposes I prefer the breed known here as the "Chester County White," and to them my experience is mainly confined. I usually have my stock pigs dropped some time in the 10th month (October), and wean them at four weeks old, after which I feed on milk and corn-meal, as much as they will eat up clean, fed at different times throughout the day, say every three or four hours. My experience convinces me that it is best to feed all my young stock "little at a time, but that little often," and that with this manner of feeding they will show a much greater rate of improvement than when they consumed the same amount of food in three feeds per day.

During cold weather I mix the meal with warm or *hot* water, and in just such quantities as will form one feed ; as soon as done feeding I mix that for the next feed which when the next feeding time comes, will be found to be a thick mush, and in order to furnish enough moisture, will have to be thinned with warm water.

Of course this mode of feeding only applies to pigs when they are small, and during cold weather ; as soon as the weather is warm enough, the feed can be mixed with cold water, and in large quantities ; but I am not sure whether it would not pay to continue the hot water all the time.

During the Summer, and when fattening in the Fall, I use two barrels, or half hogsheads, and in this way I am able to keep the slop mixed for three or four days before I use it, and allow it to become a little sour ; if the weather is cool, a little may be left in the hogshead to assist in the souring of the next batch.

I am well satisfied that four bushels of ground corn fed in this way, will make as much pork as ten bushels of *unshelled* ears, fed by throwing it on the ground, or too often on the manure in the pen.

Fed in the above manner I think one bushel of meal (one bushel of corn, will make one bushel of meal *after* the miller's toll is taken out), should make six to seven pounds of pork, which at present prices would cost from ten to eleven cents per pound. I have fed pigs which I thought made ten pounds of pork to the bushel of corn ; but I have also fed those which did not make four, so that I would feel safe in naming from five to six pounds as the average weight of pork which should be made from one bushel of shelled corn.

I have found that if I allow my pigs the range of a field of good wheat stubble or second crop clover in addition to their usual feed of meal, they will fatten rapidly ; in fact, I have known pigs to be kept in a field of second crop clover, with free access to water, for four months and improve in condition all the time. Many pigs are very fond of clover hay ; I once fed a brood sow for two months upon hay and common house slop and one quart of corn per day, and I think she improved on it. All pigs are very fond of cut clover hay when stirred among their slop, and will thrive on it. By all means ring the pigs and give them the range of a good pasture, and the more clover the better.—*Western Rural Journal.*

Preserving Timber.—To builders, gardners, and others who employ home-grown timber for fencing and other purposes, a correspondent in the London *Gardener's Chronicle* recommends a preventive of dry-rot, which he says has been thoroughly tested by experiment. It consists in soaking the timber for a short time in lime water. A pit or tank, or good sized tank, according to the extent of requirement, will answer the purpose, the lime being added to the water in the proportion of eighty-eight grains to the gallon. Timber prepared in this way is said to stand the weather remarkably well.

The Reconstructed Farmer.

JAMES R. THIGPEN, }
JOHN S. DANCY, } - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

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To the Planters and Farmers of North Carolina.

A new era has dawned upon us agriculturally as well as politically. The slave of yesterday is the freeman of today; a citizen by the laws of the country and the consent of the Southern people. It behooves us, then, to accept the present condition of things, to turn to our use and profit, if possible, the result of a revolution, the most noted of this century. We must recognize the colored laborer in his new light and rights, deal fairly and honorably with him, elevate him in the human scale, and make him an honest Christian tiller of the soil. We must adapt our planting operations to the new order of things. To this end, fellow-planters and farmers of North Carolina, we commence the publication of a monthly journal in this place, devoted to the culture of the earth in its various departments, its improvement in the productions, useful and necessary for the support of man and beast, and the elevation of our calling in the scale of scientific pursuits. We call upon the public to lend a helping hand in this undertaking by subscription and contributions in sustaining the first effort of the kind in a county that has, at least, a respectable name among the farmers of the State.

We propose to issue a plain, practical sheet, with short common sense articles and useful extracts from our exchanges. We wish to talk with the farmer in plain easy converse in the field and by the fireside about matters of every day experience and observation; to come at the best mode of plowing and planting; the best variety of seeds to be sown; the best stock of hogs and cattle to be raised; in a word, to get at the most improved manner of doing everything pertaining to the farm, in the most thoroughly practical and economical way. This is our aim—an object worthy the ambition of our generation, and the sooner we can reach the point desired, the sooner will we be a united and a reconstructed people.

Planters and farmers, shall we fail? The question is to you and with you to determine. The times form a necessity for a movement of this kind, and we believe a favorable response will be heard from every section.

The horticultural department of our journal will be presided over by Rev. Dr J. B. CHESHIRE, Rector of Calvary church, at this place, whose fine taste and energy of character is a sufficient guarantee of success in every matter coming in his line.

JAS. R. THIGPEN
JNO. S. DANCY.

NOTHING is bestowed on man in this life without great labor.

Reconstruction—Agriculturally.

The country has been politically and socially reconstructed; whether for the best is, nor will not be, our business to discuss.

The difference between our mode of reconstruction and the political, is we offer as a substitute for the "Howard amendment" an "Agricultural amendment;" for the sword and musket, the plow-share and mattox.

We propose to so reconstruct as to bring about as thorough a change in the agricultural interest as there has been in the Government, politically.

This we purpose to do, and when done, our task will be accomplished; but we fear there is so much prejudice against what is called "book farming," that we shall die and leave our task half finished.

We were once rich and proud in a system of contented laborers; we are at present poor and proud with a system of discontented and unreliable laborers.

What a wonderful change has taken place: where the husbandman once reaped a rich harvest, thorns and thistles grow; where wealth and refinement existed, we now find objects of charity; where institutions of learning flourished, we now have *none*.

What must be done to bring about the desired reconstruction?

In the first place, we must conform to the new order of things, and no longer look back to the "flesh pots" of slavery, for this will in no wise advance our prosperity.

In the second place, we must do away with the former gentlemanly habit of commanding our servants to go and do thus and so, but must attend to it in person, or have some reliable man to do it; holding to the principle that "if any thing is worth doing at all, it is worth doing well."

In the third place, we must learn to respect our former slaves as freedmen, and deal with them as honestly in all our transactions as if they were white.

In the fourth place, we must establish a healthy system of labor, by requiring rigid obedience to all reasonable demands, and must teach all idlers that they must go to some useful employment for a livelihood, or they cannot remain on our premises.

In the fifth place, we must cultivate less land, and on what we cultivate we must not only make a good crop, but the best possible *paying* crop; for every acre of unprofitable land cultivated will prove a tax on the profitable land.

In the sixth place, we must no longer depend upon the North and Northwestern States for bread, pork, hay, and the various manufactured products, that we can raise cheaper than to purchase with cotton. Experience teaches us that a half crop of cotton will bring as much money as a whole crop; therefore, no man should produce one pound of cotton to purchase articles so much cheaper for him to raise.

We might go on and mention, in a few words, the many changes that are necessary for us to make; but as we expect to labor long and earnestly in the cause, we will, in due time, endeavor to convince the most skeptical that absolute reconstruction must take place in our domestic affairs.

We can but confidently hope that our efforts will aid, in some degree, to bring about that bright future in agriculture which the Southern States so much need, and North Carolina especially.

THERE is some difference of opinion among the most advanced farmers whether it pays to steam good hay. That steaming makes stalks, straw, and coarse hay about as good as timothy, is generally conceded.

Cultivation of Cotton.

As the cotton crop has been planted, we omit an opinion upon the mode of preparation and seeding for some future time.

There is a difference of opinion about what plow is best with which to cultivate the young plant. Some will use first, on the side of the young plant, a harrow, some a cultivator, some one plow and some another; but all must, or should, agree that a light plow is preferable.

Some chop ahead, while others prefer to chop after the plow. The way *we* manage the young plant at first is, to run a light plow (a cultivator, or what is called a half-shear,) on the side of it as soon as it comes up. We are not very particular this time, there being an abundance of the young plant, and if we cover up some there will be a sufficiency left, consequently we get over very soon.

The cotton is now on a small, flat ridge, and a large quantity of the young grass is covered up, and in addition to this, the stalks of the former crop will be knocked up, and a number will be thrown out of the way of the hoe of the choppers. After the plow has gone over it, as above described, we then commence chopping; we strike but once in a place, and if the young plant be healthy, we endeavor, at this lick, to leave but one or two plants; if puny, we leave more.

Within twenty-four hours, we have the plow to follow the choppers, placing the dirt back that has been cut away by the hoe. Consequently, if there should fall a heavy rain, the young plant would not lodge or be washed up as we have often seen by chopping after the plow.

The second time the hoe goes over is the proper time to put the crop to what is called a "stand." This, above all others, is the time to be particular; we then endeavor to get all the weeds and grass out.

We then have the plow to follow immediately after the hoe, as we did at the first chopping. After we go over the crop this time with the plow, we plow our middles out nicely. After this, the plow is the chief implement to be used, as the choppers simply pass over and perfect the stand by taking out the puny plants and what grass and weeds that is too large for the plow to cover up.

FERTILIZERS.—If any farmer has failed to husband a sufficiency of fertilizers to make his weak lands produce a remunerative crop, what did he plant it for? Would it not have been better to have planted one-third or half of the same land, provided as great a harvest is obtained. How can this be done? By using those facilities which are on every man's farm in this country. By proper application of marl, swamp muck, vegetable mould, &c., broadcast and in compost heaps, your crop on the same land would be double and thrible. It requires less money, labor and time to cultivate well improved land than poor, because the young plant grows more readily and comes to maturity sooner. We know, from experience, this is true; therefore, we counsel all to make it a rule not to plant in future a single acre under ordinary seasons that will not pay the cost of cultivation.

GUANO.—Have your cattle, sheep and hogs put up every night in the stock-houses or lots; next morning after they are turned out, shovel all the droppings and put them in a pen; then throw in a handful of plaster. The pen should be sheltered.

The poultry-yard should be attended to in a similar manner. By doing this, you will have less use for the adulterated fertilizers you now import.

Cultivation of Sweet Potatoes.

In North Carolina, from the sea-shore to the ledge of rocks west, the majority of farms, however poor, will produce good crops of sweet potatoes, by the application of vegetable compost.

In the middle and western portions of the State, the lands are so close and tenacious, for the want of sand, that the roots cannot grow.

We, therefore, advise the planters of that portion of the State, and all other States of similar soil, to make the following preparation, if they desire to improve their crops:

1st. Haul to the acre 750 bushels of vegetable mould from the woods or headlands, one ton of wheat or oat straw, (if trampled by the stock so much the better), if this is not convenient, oak or pine leaves will do; also, 50 bushels of stable manure and 20 bushels of unleached ashes; mix the whole thoroughly together in one heap.

2d. Pulverize the land thoroughly by breaking it deep.

3d. To make an equal distribution of the compost easily, and not have it in the way, run the land off the distance of five rows apart in the direction you want the rows to run, if you prefer, you can check the land any distance, according to the size of the load, and drop a load in each check; then run your rows with a double mould-board two-horse plow.

Your compost is now in every fifth row, with two rows on each side, which makes it much better to put in the drill than if dropped promiscuously.

After it is drilled and the ridges made, set the plants twenty inches apart on the ridge.

4th. Cultivate well, and when the vines commence running it will be necessary to keep them from taking root on the ridge and middle by lifting them up, which is very easily done by running a stick under them.

If you allow the vines to root over the entire surface, as they will do, especially if the seasons are wet, this will diminish the crop of roots.

Western planters, try this experiment, and you will find this compost, which is composed principally of vegetable matter, will prove a protection against the compression of the soil, as well as food for the roots.

If it be too late to put up the compost, or you have not time to do so, haul a few loads of straw and put in the drill, and sow on it a sufficiency of stable manure with ashes, and make the experiment in a small way.

To be Improved.—This issue can scarcely be taken as a fair sample of what we wish and intend to make the Reconstructed Farmer.

In the commencement of all such enterprises many defects and imperfections must necessarily occur, which time alone can remedy. As we get in better working trim, improvements will be constantly introduced, and we trust in a short time to publish the magazine in a much superior manner. In the meantime we beg our readers to look with leniency upon any short-comings.

Preserve Your Copies of the Farmer.—Every subscriber should be careful to preserve each number of the Farmer, and at the close of the volume have them bound in a neat and durable manner.

They will constitute a valuable addition to every farmer's library, containing, as they do, the most useful information in all branches of agriculture.

Communications.—The editors take great pleasure in announcing to their readers that they have received the assurance of regular contributions from leading farmers in different sections of the country. The limited number appearing in this issue is by no means a just criterion by which to judge what may be expected in the future.

Broadcast Peas.

Of the various modes of bringing up our lands, impoverished from too much cultivation, we know of none superior, in fact equal, to the common field-pea of the South, sown broadcast and lightly plowed under. It can be done in June, July, or as late as the first of August, on land in rest, after oats, wheat or rye. One bushel, or one and a quarter bushels, to the acre, sown by hand and covered one and a half to two and a half inches with a one-horse turn plow, will give you a fine stand of peas, and a few weeks will show a dense growth of pea-vines. They can be turned under in the Fall, Winter or Spring with a two-horse plow, and the best results will follow. It is a mooted question what season is best to turn them under. We incline to the opinion that it is best to let them remain on the ground until January or February, when they will be partially rotted, and the soil gets the benefit of their shade during the winter. They can be more effectually turned in then than earlier. Every crop known to this section grows well after peas. The land is left free of weeds and grass, and easily cultivated the next year. You have a large amount of vegetable matter as food for the next crop, and if any of the various fertilizers are used, the result will be satisfactory. This is a cheap and quick method of bringing up our worn and tired lands. The average price of a bushel of peas in eastern North Carolina does not exceed one dollar, and the labor of sowing and plowing under is not heavy. They can be sown, also, at the last plowing of corn with good effect, though not so beneficial, as they are shaded too much by the corn until the fodder is taken off. The season is close at hand, and we hope every farmer will sow one or more acres broadcast in peas, and watch the result, and give us their experience. It is a well-established fact, the result of observation and experience in this county, that the various guanos do not pay well unless they have a large amount of vegetable matter to act upon. This is the cheapest and quickest way to get that vegetable matter, and is worthy of a trial.

Build Stock-Houses.—Farmers, have your stock been comfortably protected from the pelting storms of the past winter?

If not, in the name of humanity, (to say nothing of the pecuniary gain it would be to you) never let it be said that the horses and oxen that give you their strength, the cows their milk, the sheep their wool, and the swine your sustenance, are thus persecuted.

Send your bills to the saw-mills, and if mills are not convenient, the first spare time you have spend it in getting timber from your own land and reconstruct your filthy, dilapidated stock-houses into comfortable quarters.

Take our advice, and next winter you will feel much better contented to know that these chief auxiliaries to your comfort are humanely and profitably protected.

Planting Corn on Fresh Land.—It is our advice to all who may have virgin soils to plant in corn, to be very particular and see that the seed be well planted in the soil; for if the seed be sown in the turf and trash, it is impossible to make as much as if the seed be deposited below the turf. If it be very rough, as it oftimes is, run two or more furrows in the same row, and if you fail at any point to open the row below the turf, be certain at these places to dig holes with the hoe and deposit the grain where the roots of the plant can find sufficient food to make a fair yield.

Work for the Month.

THE month of May is at hand, and on the exertions during this month depends success.

If the proper perseverance and prudence has been exercised in a thorough preparation of the soil for the seed, by continuing this perseverance and prudence a short time longer, and with the blessings of Heaven you will be rewarded for your toil.

On the other hand, if you have been negligent in properly preparing the soil for the seed, you cannot reasonably expect a bountiful harvest, however good the cultivation or seasons may be.

If your lands are too wet, do all you can in a few days to repair your ditches and open the surface drains in every section where the water is likely to injure the crop.

Our advice to all such bad managers (for we can style them nothing else) is never to plant another acre of land when they are satisfied under wet seasons they cannot make a profitable crop on it. Of this, more anon.

WATCH FOR SWINDLERS.—We feel it to be our duty to caution planters against unprincipled (bogus) agents. There are a great many traveling over the country engaging fruit trees and vines to plant next season. We do not intend to say that all traveling agents are imposters, for we have no doubt a number of them are what they profess to be, and will furnish what they promise, being regularly authorized agents of honorable nurserymen. If you are not satisfied the agent is in every respect honest, it would be advisable to send to some respectable nurseryman and get a catalogue, make your selections from this, and order such plants as you like.

FUEL.—Have you provided a sufficiency of fuel to last you through the season?

If you have not, the cook, washer and ironer will labor under considerable disadvantage; you will be continually perplexed by having your business disjointed to haul a load of wood, now and then.

It will be better to stop and get up a sufficiency at once; we feel confident that you will never fail afterwards to keep a supply of dry wood on hand. It will expedite the cook in the preparation of your meals and the washer and ironer in giving you white and smooth clothes.

GATES.—How do you enter your fields, through a slip-gap, or by letting the fence down?

If this is the way you do, the first rainy day (for we are persuaded you are always too busy in good weather) build a substantial farm-gate. Every farmer has, or ought to have, a sufficient knowledge of tools to do this.

SPECIMEN COPIES.—We send a large number of specimen copies of the RECONSTRUCTED FARMER to persons who have not subscribed for the same, but whom we now expect to reckon among our regular patrons.

Many have signified their intention to subscribe after the first issue of the magazine, and we trust all will send in their names at once, so that they can be supplied with the initial number. Unless directions are received from those to whom specimen copies are sent, it will be taken for granted that they do not wish to subscribe, and the magazine will be issued to them no longer.

TO SUBSCRIBERS.—It is generally understood that subscriptions for the RECONSTRUCTED FARMER are due on receipt of the first number.

It is impossible for us to carry on the business on a credit system; and we trust that all subscribers will immediately respond with the amount of their subscriptions. All orders hereafter must be accompanied with the cash, which can be forwarded by draft, express, post-office money order, or in registered letters.

The FARMER will be sent twelve months to any address for two dollars, *in advance.*

HORTICULTURAL DEPARTMENT

DR. J. B. CHESHIRE.....EDITOR.

Practical Reflections.

IT is one of the evidences that our Southern people are rousing themselves to renewed exertion to improve and adorn our land, to find so many of our planters and farmers turning their attention to new methods of cultivating the earth and bettering their condition; and there is no more hopeful sign of the times, than to see with what earnestness and zeal they are planting fruit trees and grape vines, and thus diversifying the resources of the country. It has been too long thought by many farmers that horticulture did not come within the province of agriculture. They treated it as a distinct branch of the science of production; as being more in the region of fancy and taste, than that of business. But yet, properly considered, agriculture and horticulture are intimately connected, and the one is the complement and perfection of the other.

Agriculture is that cultivation of the soil on a large scale, which includes all the operations for the production of the great staples of food and commerce. Horticulture is a more restricted cultivation, of a higher and finer grade, for the production of fruits and vegetables, and shrubs and flowers, which, though not the staff or essentials of life, are yet necessary to our well being and real enjoyment. Horticulture is the ornament and crown of agriculture, and every agriculturalist who desires to be such in the completeness of the character, should be an intelligent horticulturalist. Horticulture is, in a degree, the test and indication of a people's advancement in civilization and enlightenment. The rudest nations have some kind of agriculture to provide the necessaries of life; but only as a people advance in the arts and sciences of a higher civilization, do they show the taste for, and improvements in, a systematic horticulture. Every man, then, who wishes well to the prosperity of his country, has a deep interest in seeing these two sciences flourish through the land; for they are the motive powers of progress—they are at the foundation of all social development—they soften and refine the rugged nature of man. The savage cannot be christianized or civilized until he gives up his roving life and settles down to be a cultivator of the soil; and as this cultivation is carried on to its higher stages, so does the national character advance to its highest refinement. To plant seed—to raise corn—to tend crops—to rear trees thro' many years—to watch them grow and wait for the fruits of his labor—to adorn and embellish his home with shrubs and flowers, makes man a creature of patience and hope—of diligence and good works.

There was more meant in the Divine ordinance, that man should "dress and keep the garden," than a mere provision for his bodily wants. It had a bearing upon his moral and spiritual improvement. He who engages in the cultivation of the ground with a right spirit, must have a higher aim than merely to get along or to make money. He should carry his heart and soul in the occupation, to develop the hidden resources of the soil; to advance the prosperity of his country; to enlarge the enjoyment of his race, and thus improve both himself and them. The enlarging a man's crop may thus enlarge his heart; as his trees flourish, and bloom, and bend with fruit, his affections will grow, and his hopes and sympathies be bright and radiant; and his happiness will be to him a fruit of joy more relishing than apples or

wine. Such pleasures as these are never found when the soil is cultivated in a poor and niggardly manner, and no scenes of horticuitural improvement adorn the land. Man goes back to barbarism just as the soil goes back to barrenness and waste. This fact is proved in the history of all the past. As nations advanced in the sciences of agriculture and horticulture, the embellishment of the arts and sciences of architecture and painting, and all the refinements that make the poetry of life, flourished among them. But when war and civil strife drove the farmer from his plough, and his trees and shrubs, then society went backwards, and the land was cursed with decay and ruin. When Egypt was the granary of the world, she built those pyramids and temples which are now the wonders of the world. They grew as naturally out of her agricultural prosperity as her harvest grew out of the well-cultivated valley of the Nile. And just as naturally, her present poverty and degradation, are the result of the tyranny and misrule of the present government, which has destroyed her agricultural power.

If, then, we wish to see our Southern country arise out of her present depressed condition and put on the beautiful garments of plenty and prosperity, we must begin with a strong arm and a resolute heart to cultivate mother earth and make her bring forth all her hidden treasures. Here is the starting point for all true material advancement; this is the foundation upon which all improvements must rest. Every farmer must consider it his special vocation, not just to make cotton and corn, but to bring around him all the products and improvements which will give variety as well as profit to his employment, and educate himself in the higher branches of his noble profession. He must not only have his broad acres devoted to the main crop, but he must have his special acres for his orchard and his vineyard, and the ground about his dwelling made beautiful with ornamental trees, and shrubs and flowers. He must study the art and practice the skill, to make himself familiar with these things; and they will repay him by opening to him a thousand sources of enjoyment which he never knew before. The beautiful has its uses in life, as well as the more material and profitable. There is a silent and mysterious education of the soul, which goes on through the senses. The beautiful and the ornamental have a constant influence upon those who move among such scenes, to elevate and purify the mind; to make us less material, and more open to the sway of those invisible powers that lie beyond the veil. They lead us "through nature up to nature's God," and thus they are beneficial to society at large, as well as the individual cultivator. He who improves and beautifies his grounds, is improving and elevating the whole tone of society; he embellishes his own estate, with the additional satisfaction of knowing that he is giving a new charm to the life of his fellow-men. The horticulturist who adds new graces to the scenery and new fruits to the food of men, is, in a measure, improving the character, and health, and happiness and long life of his neighbors; and thus, in some degree, is proving that he loves him as himself, and fulfils, thus far, "the royal law."

This will be the aim of our journal; and we shall give, at times, such advice and directions with respect to the culture and treatment of trees and vines, and shrubs and flowers, as will tend to awaken an interest in this very important subject, and aid in directing those who desire to engage in this work, to a profitable and pleasant prosecution of the practice

of horticulture; which will prove a labor of love to all those who begin to exercise themselves in this, the most ancient, as well as one of the noblest employments of man.

Spring Pruning.

This is equally injurious with Spring planting. If trees are properly looked after and cared for when they are young, and the surplus limbs cut out while they are small, there would be little opportunity to injure trees by pruning. But when they have been neglected, and a large limb has to be removed, because of decay or over-crowding the other limbs, it should be carefully *sawed* off in the *Fall*, and a thin coat of tar applied to the wound. Tar is the real "Balm of Gilead" for healing trees.

A limb should never be cut off even with the body of the tree, but just above the ring or swelling that is always at the base of the limb where it joins the body. The healing begins at this ring or swelling, which gradually rises over the wound, and in a few years will close over the exposed wood. The custom with too many of our farmers, of hacking off limbs in the Spring, with an axe or hatchet, leaving the exposed wound to bleed, and keep damp until it rots, sending down the mould of decay through the whole trunk, is as unreasonable as if a surgeon should amputate a human limb, and then leave it without tying up the arteries or putting on the needful bandages. It is to be hoped that trees have not sensation to feel this cruel treatment, though they certainly have life to be destroyed by it. Burns' lines, with a little alteration, apply to such cases very appropriately:

> "Man's *inhumanity* to *trees*
> Makes countless thousands *die*."

Any one traveling through the country may notice fine orchards ruined by this barbarous treatment. We have now in our "mind's eye" some noble trees, with great black holes rotting into their trunks, whose limbs have been hacked off in the Spring, lifting up their remaining branches with sad and sickly-looking foliage, a mute yet eloquent protest against such injudicious pruning, yet protesting in vain! Year by year the Spring slaughter of limbs goes on, and in a few more seasons the whole orchard will be a ruin. Let every man who wants a healthy tree trim in the Fall, if trimming must be done, and then coat over the wound with a good dressing of North Carolina tar, and then he will never see any decay follow from the use of the pruning-knife and the saw.

Spring Planting.

The custom which prevails at the South of planting out fruit trees or shade trees in the Spring may be of advantage to the nurserymen who raise trees, because so many of them die, and they sell more to replace them; but it is very injurious to those who wish to raise fruit or to have shade, because so few live planted at this season; and those that do live, never flourish so well as if put out at the right time.

All deciduous trees should be set out in the Fall, say the month of November.—And the reason for this is obvious to any one who will reflect upon the matter. When trees are taken up, many of the small roots, which contain the mouths of the plant, are necessarily cut off. If the tree is set out in the Spring, these new roots and mouths cannot he reproduced before the warm sun and winds begin to evaporate the moisture from it, and not having roots enough to take up the sap from the soil to supply the demand for growth and evaporation, the tree dies, or struggles on a long time before it can

adapt itself to its new position. But transplanted in the Fall, the young roots and mouths are forming in the ground all through the Winter, ready, when the Spring comes, to afford it abundant moisture and nourishment to carry on a vigorous growth.

Too much care cannot be given in planting out trees; giving them a large hole of well prepared soil to start in; spreading out the roots and sifting in the fine soil among them, so as to leave no vacant spaces among the roots. The growth and yield of trees carefully transplanted will more than repay the cultivator for his additional labor and expense.

As an illustration of this, the *Horticulturist*, for March, gives a striking example. An enterprising farmer bought 100 trees to plant an orchard. Wishing to have them live and thrive well, he hired a professional gardener to come and plant them. In the morning he went away, leaving the gardener at work, thinking he would make rapid progress and do every thing well. But when evening came and the farmer returned, there stood only ten trees planted out of the entire one hundred. Sadly disappointed at the prospect of such slow work, and with feelings of anger that it was done at the high price of $2 per day, he dismissed the gardener, and concluded that he and his "hired man" could do it fully as well in much less time, and at one-half of the expense. So it was done. Mark the result: Ten years afterwards the same farmer was at work one day in the same field, when a gentleman just riding past stopped short and got out to examine the trees. After looking attentively at the orchard for a few moments, he asked the farmer, "why all the orchard did not look as well as the first row of trees? That row is three times as large and thrifty, while the rest of the orchard is small and dwarfish in appearance." The farmer replied, "They were all planted at the same time; those ten, which are so large, by a gardener; the rest by myself and hired man. I thought the gardener too slow and charged too much, and dismissed him; but if I had paid him any thing he asked and let him plant all the trees, any one of them now would alone have returned the entire cost." The gentleman smiled and observed, "*I am that gardener*, and I thought you would find out, sooner or later, that it required more knowledge to plant out an apple tree than a post."

Let our farmers remember that in planting out a tree, they have a living thing to deal with, that must have its nature and its wants studied and attended to, and if they do this carefully and generously, they will reap in proportion to their labor and care.

Scuppernong Grape.

We find the following article in the monthly Report of the Department of Agriculture, for November and December, 1868, and we commend it to the careful study of our readers. We think Mr. Froelich's ten years' experience has proved the unrivalled excellence of this grape and the profit of its culture, is inducement enough to prevail with our farmers to "cover their hills with the shadow of this vine:"

The following letter has been received from Louis Froelich:

Kenansville, N. C., November 1, 1868. It gives me pleasure to send, in accordance with your request, my ten years' experience in the culture of the Scuppernong grape. I will first give the several points, from one to six, and then present a general view of the subject.

1. The vines should be planted 45 feet apart, or 21 vines to the acre.

2. The vines should be planted in December or January.

3. We have the White and the Black Scuppernong, and the Flower, the Mish, and the Bullace.

4. One hand is required for each 10 acres under cultivation, and in the gathering season one hand to the acre.

5. The yield this year has been equal, in quantity and quality, to the crops of the preceding 10 years. This variety is the only grape entirely free from disease, and the vines are not troubled by insects. They sprout very late in the Spring, and are, therefore, never injured by frost, and their hardy wood, and the thick, leathery skin of the grape exempt them from injury from hail-storms, &c., rendering the Scuppernong the surest crop of grapes I have ever found or heard of in any wine-growing country. At my old home on the Rhine we had in each five years two entire failures, two seasons of inferior wine and only one perfect crop; and I found nearly the same results in Austria, Hungary, France, and Italy, and in the northern or western parts of the United States. Indeed, we have not in this country a single variety, except the Scuppernong, which is not liable to injury from frost, or in danger of not ripening through unfavorable seasons or the various grape diseases. With this variety, however, we may calculate with certainty each year, in both quantity and quality, and with the fifth part of the labor and expense attending the cultivation of other varieties, the average yield for a three year old vine is one peck; five years old, two bushels; full grown, ten year vine, twenty-five bushels.

6. Expenses per acre the first year are as follows: 21 plants, of good size and well rooted, $5; planting and staking, $10. Third year, 84 arbor posts, and 21 dozen fence rails, $15. Fifth year, 336 posts and 1,000 rails, $60. Tenth year, 500 posts and 1,500 rails, about $100. From the fifth year it takes one hand for cultivation and the extension of arbors, and from the first to fifth year about two years labor of one hand is requisite. After the tenth year it costs very little to manure the vines every two years, and gathering expenses and repairs of arbors may reach $10 per year. When 15 years old, and kept in the highest cultivation, the vine will yield 35 to 40 bushels of grapes. We have a good many single vines that bear 50 to 75 bushels. A full ripe bushel of Scuppernong grapes weighs 60 pounds, and will yield 4 to 4½ gallons of juice, after which the pommace will make five gallons of vinegar. To the four gallons of juice add four pounds of crushed sugar, and at the end of six months you will have 3½ gallons of good marketable wine, worth on an average $2 50 per gallon. The five gallons of vinegar will yield at the end of three months 4½ gallons of first quality vinegar, worth 50 cents per gallon, thus realizing from one bushel of grapes $11; from one vine, in full bearing, $275; and from one acre of 21 vines, $5,775. The expenses attending the production of this wine foot up nearly $800, and for the vinegar $125, leaving a profit of about $4,850 on the product of the acre of vineyard.

The Scuppernong is the most profitable grape in the world, but is known only in the south, especially in the Carolinas, as the summer seasons of the north are not long enough for its successful cultivation. In the Carolinas it grows on the poorest sand hills, on the lowest swamp lands, and on stiff, clay, gravel land, the last named being the best for it. This grape has grown wild, without care or effort to improve it, but last year I gave this subject special attention, and found the vines highly susceptible to improved cultivation.

The vine must be planted well rooted. Dig a hole four feet square and two feet deep. Throw the first foot of eath on one side, and the second foot on the other side. Throw the first foot of earth back into the hole, then fill up to within six inches of the top with good compost, and then spread the roots of the vine out carefully, and fill the hole with the same compost, about three inches above the surface, trampling it level with the surface with the feet. Fasten the vine to a pole about three inches thick, and eight feet above ground, put in when the vine is planted. During the first and second years, when the vine is sprouting, all side limbs should be pinched off smooth, the main stem only being allowed to grow up. Keep the main stem well fastened and straight, and raise it about a foot higher than the pole,

and then allow the sprouts to spread out in all directions on a 12 feet square arbor. I used last year, instead of slats or rails on the arbors, telegraph wire, spread over like a sifter, about two feet square, with surprising results. The vines grew twice as much as those of the same age on wooden arbors, and the grapes ripened more equally, and one-third more in quantity. The wire arbor costs little more and will stand thirty years when galvanized. The sun and air strikes better through the wire, and the vine will grow much faster than when on the slats or rails, the little ringlets which sprout out from the vines winding around a small thing more readily, and thus keep the vine steady and assist growth.

The third year the vines must be manured, and every three years thereafter. For this purpose dig a ditch around the vine (so far as the little roots reach) one foot wide and one foot deep. Fill the ditch half full of compost and then fill up with top-soil. The manuring should be done in December or January, as summer manuring makes the vine rusty, and causes the fruit to drop off before ripening. Raw stable manure should not be used, but should first be composted, mixed with any soil. The cheapest and best is swamp muck, and if you wish to make it as rich as guano, mix with it bone-dust, ashes, and lime, and about 10 per cent. of stiff soil.

Unlike all other grape vines the Scuppernong does not need to be pruned back. After the grapes are gathered take out all the dead limbs, and cut off all the ringlets, for they are destructive enemies of the vine when wound around the limbs, preventing full growth, and sometimes killing the limbs. The outside end limbs, of last year's growth, should be straightened and spread out on the arbor in all directions and fastened. This is an important work, as without it the vine will grow wild and tangled, and the limbs be prevented from spreading, in consequence of which some of the fruit will never be reached by the sun or air, the sugar in the grape will not get a chance to concentrate, and the grapes will fall off before maturing.

Grapes should be gathered at three different times by the following plan: Make a wooden frame about ten feet square, placed on two axles with four small wheels; cover the frame with a strong cloth, made a little deeper in the middle; roll this frame under the vine you wish to shake; then shake the vine gently with a smooth iron hook fastened on the end of a stick, when only the perfectly ripe grapes will fall. The unripe grapes must be picked out for vinegar, and the leaves and trash should also be taken out. In this way two hands may pick 100 bushels a day. From the first gathering you will get about one-third of the crop. The second gathering comes 14 days later, and the third 14 days after the second.

The above treatment of the Scuppernong insures the following improved results on the old treatment: The first year we get three times as many grapes, which will, without the addition of sugar, produce a splendid wine, similar to Rhine wine. By adding one-half to one pound of sugar to the gallon we get heavy wines, similar to Malaga, Madeira, and Port.

Scuppernong rooted plants can be raised only by layers; cuttings do not take root, but bleed to death. The seeds of the White Scuppernong produce the Black Scuppernong. The white grape is a grade richer in sugar, and finer in flavor than the Black, Flower, and Mish grapes.

Strawberry Culture.

Every one who has a garden should grow a few strawberries. It is a very simple matter to grow a moderate crop; but to produce it in abundance and of the best quality requires considerable skill and constant care.

The best and largest crop of strawberries that I ever raised was produced in the following manner: A bed, twenty-five feet wide and two hundred feet long, was prepared by spreading upon it twelve cart-loads of old, well-rotted cow manure; the ground was then plowed deep and harrowed down smooth and level. About the middle of April the plants were set out in rows, two feet apart, with a space of about eighteen inches between them.

No weeds were allowed to grow among the plants, and the surface of the soil was

stirred at least once a week during the entire summer. Two or three runners were allowed to grow from each plant, and these were placed so that they could take root between the old plants in the rows.

In the autumn, when the ground began to freeze quite hard at night, the entire bed and plants were covered with coarse grass to the depth of two inches, after it had partially settled. To prevent the mulching being blown off, a few poles were laid around the outer edge of the bed. In the spring, after the severe cold weather was past, a man passed along each row, and with a stick parted the mulching just over the centre of each row of plants, so as to allow the air and light to reach the crowns and permit the leaves and fruit-stalks to grow up without hindrance. None of the mulching was removed from the beds; consequently the soil was kept moist and the fruit clean. This bed yielded a little over twelve bushels of fruit the second season after planting, which was the first crop; after the fruit was gathered, all the mulching was removed, and the soil between the rows was forked over, but no more manure of any kind was applied. The runners were not allowed to grow or take root except in places where there was a vacant space in the rows, and the next fall the mulching was applied the same as before. This treatment was continued for four years, and then the plants were ploughed under.

I have tried many different systems of culture for the strawberry, but none that has given so much satisfaction as this one, and, although it may be too expensive for extended culture, yet for the amateur who does not grow more than half-acre or acre, and desires to produce the largest amount possible on a given space, I can confidently recommend the above as being a system that will not only give an abundant crop, but the greatest amount of pleasure and profit. Many of the more delicate but large foreign varieties will succeed when treated in this manner, although they often fail when grown without mulching or winter protection.—*Hearth and Home.*

A Scotch farmer finds by measurement that his cattle drink over twenty-five pounds of water each day.

Agricultural Colleges—Congressional Aid.

Some years since Congress voted a quantity of the public lands to each State to aid in establishing therein an Agricultural College. In several, these institutions are already in operation, in others buildings are in progress of erection, but in some disputes about locations and other matters have prevented decisive action up to the present time. A summary of Congressional donations, for College purposes, follows:

	Land Scrip.
Yale College Scientific School	$160,000
Amherst College	360,000
Cornell University, Ithaca, N. Y.	990,000
Center Co., Pa., College	720,000
College, Lansing, Mich.	240,000
" Maryland	210,000
" Hanover, N. H.	150,000
" Burlington, Vt.	150,000
" Madison, Wis.	286,000
" Morgantown, Va.	150,000
" New Brunswick, N. J.	210,000
" Lexington, Ky.	330,000
" Oakland, Cal.	150,000
" Providence, R. I.	120,000
" Manhattan, Kansas	90,000
University, Illinois	480,000
Total scrip	$4,796,000

Here are sixteen institutions which have received, from the reserved fund of the people, nearly five millions of dollars for the diffusion of agricultural information. This donation ought to do a great amount of practical good, instead of being frittered away on the visionary projects of favorites, as is too often the case with the benefactions of private individuals. In some instances, already brought to the notice of the public, the promise of a wise application of the funds is far from flattering; in others a proper use has been made of the means supplied, and if the resultant good is not equal to expectations, the failure must be attributed to other causes than a wanton waste or misapplication of the means accorded by Congress for educational purposes.—*Rural New Yorker.*

Wash for Bodies of Fruit Trees. One ounce of copperas to eight or ten gallons of water forms a good wash, and is advised for trial as preventative against blight. One pound of bleacher's soda and one gallon of water forms a wash that cleans off all insects.

Yamoka, or Sweet Potato.

This is the aboriginal name for the sweet potato, which is far more the staple plant of our region than cotton, and may be made quite as profitable to us. This name is here specially bestowed upon it as dessicated, or with all the moisture and decaying matter dried out of it, so that it can be kept for years and carried to any quarter of the globe for use there, and be used for all purposes with as muoh advantage and pleasure to the user as if the potatoes were just from the ground.

We have often spoken to our readers of the great value of the sweet potato. It impoverishes the soil far less than grain crops, and is produced in far greater abundance. The exhibitor of the dried fruits at our Fair says it yields from 15,000 to 20,000 pounds to the acre, while corn yields only from 1,000 to 1200 pounds. At all events, it yields far more than the latter, and as it does not materially impoverish the soil, and prepares it for other crops, it is far more advantageous.

It is better food for horses, hogs and cows than corn or oats, and animals travel and work better when fed on it than upon corn. This was fully shown during the war. The only trouble has been that it was so difficult to keep these potatoes even during the winter; whole heaps of them, sometimes when put up, rotting away and being lost from overheating, fermenting and rendering useless the industry of the whole season.

This is obviated by the dessicating and preserving them as is now done by Judge Warner, formerly of Natchez, Miss., and now of Amite City, in this State, who is showing at the Fair Grounds specimens of it thus dried and preserved, so as to keep for any number of years, good, sweet and valuable as when green. All that will cause decay is gone. It can be packed in warehouses or sent abroad, or taken as ship stores and the like, with entire safety.

We can hardly estimate the advantages this will confer upon the South. Ten times as large a crop can be raised and with far less risk of loss than in corn. The surplus can be used to fatten all the animals of the farm, and an export crop prepared, which will give the people of the colder climates, where this vegetable will not grow, and our own in the warm season, when it cannot be kept over from winter, an abundance of it, clear of any tendency to spoil.

We perceive that the dessicated sweet potato has received "honorable mention" at the Fair. It deserves a medal of gold more than any hardware or silverware—whether manufactured in other States or in Europe—deserves a bronze medal. It is a step toward substantial independence for ourselves, and to the making others depend npon us, by which alone the South can hereafter expect to prosper.—*New Orleans Picayune.*

A Crack in a Hog Trough.

The following, from a recent number of the *Prairie Farmer*, is almost equal to Franklin's story of the whistle:

A few days ago a friend sent me word that, every day, he gave nearly twenty pails of buttermilk to a lot of "shoats," and they scarcely improved at all. Thinks I, this is a breed of hogs worth seeing. They must be of the sheet iron kind. So I called on him, heard him repeat the mournful story, and then visited the sty, in order to get a better view of this miraculous swine. I went into the pen, and on close examination, found a crack in the trough through which most of the contents ran away under the floor. Thinks I, here is a type of the failures of our agricultural brethren.

When I see a farmer omitting all improvements because of a little cost, selling all his farm stock to buy bank or railroad stock or mortgage stock, robbing his land, while, in reality, he is also robbing himself, and his heir, thinks I, my friend, you have a crack in your hog trough.

When I see a farmer subscribing for a half dozen political and miscellaneous papers, and spending all his time in reading them, while he doesn't read a single agricultural or horticultural journal, thinks I, to myself, poor man, you have got a large and wide crack in your hog trough.

When I see a farmer attending all the political conventions, and coming down

liberally with the "dust" on all caucus conventions, and knowing every man in town that votes his ticket, and yet, to save his neck, couldn't tell who is President of his County Agricultural Society, or where the Fair was held last year, I "unanimously" come to the conclusion that the poor soul has got a crack in his hog trough.

When I see a farmer buying guano, but wasting ashes and hen manure trying all sorts of experiments except intelligent hard work and economy, getting the choicest of seeds regardless of cost, then planting them regardless of cultivation, growing the variety of fruit called Sour Tart Seedling, and sweeting it with sugar, pound for pound, keeping the front fields rich while the back lots are growing up with thistles, briers and elders, contributing to the Chocktaw Indian fund and never giving a cent to any agricultural society; such a man, I will give a written guarantee, has got a crack in his hog trough, and in his head also.

When I see a farmer allowing loose boards all over his yard, fences down, hinges off the gate, manure in the barnyard, I come to the conclusion that he has got a large crack in his hog trough.

When I see a farmer spending his time traveling in a carriage, when he has to sell all his corn to pay the hired help, and his hogs are so lean that they have to lean against the fence to squeal, I rather lean to the conclusion that somebody that stays at home will have a lien on the farm, and that some day the bottom will come entirely out of his hog trough.

Treatment of Young Peach Trees.

In planting a peach orchard we select trees of one season's growth from the bud. These, if well-grown, will be not less than five or six feet high, and will have many side or lateral shoots branching out horizontally from the main or vertical stem. In addition to the side branches, there will also be found numerous buds, extending from the ground to the top of the tree. Cut away all the branches and buds to the height of twelve or fifteen inches; next cut away all the buds below the point at which it is intended the tree shall form its head, except six or eight buds, which are to be left at regular intervals, and on different sides of the stem. These last-mentioned buds will push into as many branches as there are buds. It will be necessary to keep these side branches pinched back to ten or twelve inches during the summer, to prevent them running off with the growth and robbing those buds and branches selected for the future head of the tree.

Some time after the fall of the leaves, and before growth commences in the Spring, reduce the side branches to one bud each, and when the branches from these buds shall extend to ten or twelve inches, pinch them as directed in the first year. The treatment will be the same in the third year as we have directed for the second, except at the end of the season cut away all the side branches except those intended to form the head of the tree.

The object of the side branches, of which mention has has been made, was to strengthen the stem or trunk of the tree; without them, the tree would have become top-heavy, and bend the trunks. Trees grown as we have described, will have straight and tapering stems, which will be of sufficient strength in their fourth year to stand erect.—*Horticulturist.*

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THE RECONSTRUCTED FARMER

A

Monthly Magazine,

DEVOTED TO

THE FARM, THE GARDEN,

AND

THE HOUSEHOLD.

PUBLISHED AT TARBORO, N. C.

MR. & MRS. OWENS' SCHOOL,

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN,
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For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattox.

VOL. 1.] TARBORO', N. C., JUNE, 1869. [No. 2.

Poisoning Land.

BY PROFESSOR E. PUGH.

[We hope all of our readers will give the following a careful perusal, as it sets forth clearly that all farmers should know how long those various elements will last in the soil. Therefore, we think it becomes necessary for us to have our lands analyzed, and learn whether each of those properties abounds in the soil or not. By so doing, we should know exactly when to make the application, and also the proper amount to be applied.--ED.]

Notwithstanding all that has been said and written during the last few years, upon the subject of agriculture, the ideas of the great mass of people, upon many points of the highest importance to agriculturalists, are very much confused. Upon no questions is this more marked than upon those suggested by the words, nutriment, stimulant, and poison, in reference to the growth of plants.

Many farmers think that certain substances stimulate the land at first, and overtax its powers, and ultimately *poison* it. Such ideas originate in conceptions obtained from false analogies which men are too prone to draw between animal and vegetable life. The early vegetable Physiologists were, for a long time, deceived as to the true character of vegetable growth in the same manner; but at present scientific men are aware that no aid is obtained in studying vegetable physiology by the apparent analogies afforded by animal physiology. A difference of opinion sometimes exists as to what is the correct definition of a *poison* in regard to animal life. And a more difficult question might arise on the same subject with regard to vegetable life.

But waiving these difficulties we may get at a practical definition of what nutriment, stimulant, and poison, applied to vegetable food may mean, which will throw some light upon the subject we are considering.

First. NUTRIMENT.

Under this may be included all those elements and combination of elements that are essential to healthy and vigorous vegetable growth, whether obtained from the soil or the air, which enters into the plant to take part of its sustenance.

These embrace about thirteen different elements, all of which enter the plant, more or less, in combination with each other; eight of them *must come from the soil*, and the remainder *may* come from the soil, or from the air, or from both. Independent of vegetable growth, there is all the time a more or less active interchange of these latter elements between the soil and the air, so that it is difficult to decide how far they are obtained by the plant directly from the air through the leaves, or indirectly from it at the roots, through the soil; consequently while *all* scientific men admit that these eight substances *must always be present in the soil*, to ensure its fertility,

there has been a difference of opinion as to how far it is necessary to add some of the remaining five to the soil to ensure conditions "amply sufficient for the purposes of agriculture." *If all of these substances are not accessible to the plant in the soil, or the air, it cannot grow.* At times some of them fail in the requisite quantity, and it becomes the duty of the farmer to find which they are, and to apply them in manures to the soil.

Secondly. POISON.

All substances may be considered poisonous which are not included above (that is, which do not enter the plant to form a part of the increase during healthy growth,) and when placed in contact with growing vegetable matter, are absorbed by it, and prove injurious, or destructive, to vegetable growth. This may include many combinations of elements, which combined in other proportions or in different circumstances, might be nutritious; acids or alkalies might, when *alone*, act as poisons, when in the *combined* state they would be nutritious. The products of decomposition of vegetable matters are, no doubt, in some instances, poisonous to vegetable growth; the ultimate cause of the disease to which some plants, as the potato, or the clover, the vine, &c., in America and Europe are liable, may be due to poisonous products formed in the soil.

The theory of the rotation of crops, which at first was explained, simply by supposing different plants absorbed different substances from the soil, and while those of one plant were being removed by it, those of another were accumulating, has become more complicated of late, by certain considerations which seem to indicate that, substances poisonous to one plant and not to another, may disappeer from the soil, during the growth of the latter, and hence leave the land in a state adapted to the wants of the farmer.

All substances which are nutritious to plants in ordinary circumstances will prove destructive to them if presented in too large quantity, and hence it is not always easy to decide what is a poison in the sense of the definition just given.

Thirdly. STIMULANTS.

None of these substances which are usually considered stimulants, are such in the sense that this is applied to animal life. Nothing is more absurd and ludicrous than the common notion that certain substances, as guano, or plaster of paris, stimulate the land in any sense of the word.

It is not easy to apply this term to substances affecting vegetable nutrition, yet if we must use it, substances like lime, which do not afford nutriment directly to plants, in the same degree that they promote the growth, could more appropriately be called stimulants, than those just noticed.

Some chemical substances which promote the sprouting and early growth of plants without affording them any nutriment, might also be called *stimulants*, and others which retard this action might be called *sedatives;* but as these terms convey *improper meanings*, and imply that we know a great deal more about vegetable physiology than we do, it is best to discard them altogether.

PRACTICAL CONSIDERATIONS.

From the above we might infer,

1st. That soil to be productive must contain every one of about eight different substances, and four to five other substances must be present in the soil or the air.

2d. That if any one of these fails in the soil, barrenness will result, no matter how much of all the others may be present. Though a sufficient number of all the other substances were present to produce crops for one hundred years, *did this one not fail, the absence of this would render the soil barren.*

3d. If the soil contain a limited quantity of any one of these substances, and no more be added during successive years, in which crops are grown and removed from the land, this substance must ultimately all be removed, and barrenness must result.

4th. If a soil be barren owing to any of the above causes, the addition to it of the failing element will restore its fertility again, and in consequence of this fertility new crops may be raised, and hence new quantities of all the other seven substances removed from the soil. If this process be repeated, and by successive additions of the failing element, successive crops be raised, a second and

a third element, will all be removed, and these, too, must be replaced in the same manner as the first, in order to maintain fertility. *The soil will be poorer after the addition of these failing elements, because with them we are enabled to raise crops which remove from the land, not only the element added, but about seven other elements that were in it before.*

5th. The substances usually called stimulants are simply such as afford to the soil certain elements of *nutrition*, which are not present in an available form for the demands of vigorous growth. They do not produce the crop, but, united with other substances in the soil and air, they produce it. They form *a part of a whole*, without which the plant cannot grow, just as the axletree of a wagon forms a part of the wagon, without which it could not move. Without the axletree the wagon could not be worn out, yet it would be a strange kind of logic which would infer, that because the entire wagon was worn out *after* the addition of the axletree, that therefore the axletree had acted as a *stimulant* upon the wagon, and worn it out; or that because the same result could not be obtained with the old wagon as with the new, therefore, the axletree had *poisoned* the wagon. Absurd as this kind of logic may seem, the farmer may rest assured that it is quite as rational as that which supposes certain substances to stimulate or poison the land. And the farmer might quite as rationally, refuse to replace the broken axle of his wagon, because after doing so the wagon would be worn out, as to refuse to supply the failing element in his land because the crops that would follow would exhaust the land of the substances that it already possesses.

These considerations may be illustrated by *an example.*

Suppose a soil to contain enough of an element A to raise wheat for four years; enough of an element B to raise wheat for six years; enough of C for eight years; enough of D for ten years; and enough of all the other substances S required for twenty years. If such a soil had been grown with wheat since 1856, we would have in

1860, all the A exhausted,
sufficient B for two years,
sufficient C for four years,
" D for six years,
" S for sixteen years.

This soil is barren now for want of A; let us add sufficient A to last two years, and then we get two more crops, and we will have in

1862, all the A again exhausted.
" B exhausted,
sufficient C for two years,
" D for four years,
" S for fourteen years.

The soil is now barren for want of A and B; let us add enough of each for two years, and then we will have in

1864, all the A again exhausted,
" B " "
" C " "
sufficient D for two years,
" S for twelve years.

Now the soil is barren for want of three elements, A, B, and C. If these were added we would have in

1866, all the A again exhausted,
" B " "
" C " "
" D " "
sufficient S for ten years.

Fertility can now only be restored by the addition of four elements, A, B, C, and D.

Now, a farmer commencing to work such a soil in 1856, might have supposed that it was inexhaustible, but in 1860 it becomes barren.

The addition of the manure A to it. then, restored its fertility, he might now get the idea that A would do to restore the fertility of *all worn out land;* but after two years more, A ceases to be of any perceptible use; he might then conclude that A had *poisoned the land*, but on the addition of B, he restores fertility. He would, doubtless, now recommend B to all his neighbors; but soon B becomes inoperative, and must be set down as a poison. We need not here dwell upon the fallacy of such conclusions, yet they are entertained by farmers all over the country.

I have avoided the use of the names of the elements of fertility to soils, in order to meet the tastes of those who do not like to be troubled with scientific terms.

It is speed that kills the horse.

Walks and Talks on the Farm.

One of the most interesting experiments I have seen for some time was made last year at the Michigan Agricultural College, by Professors Miles and Sanford Howard to ascertain whether an animal eats less or more food in proportion to live weight as it grows older, and whether we get less or more increase from the food consumed.

Three thoroughbred Essex pigs were weighed when 11 days old. They then weighed 14½ pounds, or 4.83 pounds each. They were then allowed all the milk they would eat, and consumed the first week 79.19 pounds. They then weighed 25½ pounds, or an average of 8½ pounds each. The next week they eat 106.94 pounds milk. At the end of the second week they weighed 39 pounds, or 13 pounds each. The next week they eat 129.94 pounds of milk, and at the end of the week weighed 50 pounds, or 16.66 pounds each. The next week they eat 141.81 pounds milk, and at the end of the week weighed 64 pounds, or 21.33 pounds each. They gained on an average 3.66 pounds each the first week, 4.5 pounds the second week, 3.66 pounds the third week, and 4.66 pounds the fourth week

The average amount of milk consumed for each pound of live weight was: 1st week, 3.96 pounds; 3.32 pounds; 3d week, 2.92 pounds; 4th week, 2.49 pounds. This is a very remarkable *falling off in the rate of consumption in proportion to live weight*, as the animal grows older.

At this point the experiment terminated "for want of suitable facilities for weighing the mixed food," Shame to the State of Michigan, shame to a nation of Farmers, that our oldest and best Agricultural College should be compelled to stop such an important experiment for want of a pair of scales!

The gain for each 100 pounds live weight was: 1st week, 75.86 pounds; 2d, 59.92 pounds; 3d, 28.20 pounds, and 4th, 28 pounds.

The amount of milk consumed to produce one pound of increase of live weight was: 1st week, 7 20 pounds; 2d, 7.92 pounds; 3d, 11.81 pounds; and 4th, 10.13 pounds.

So far as these experiments go, they sustain a principle which I have long supposed was true, that, other things being equal, the more you can get an animal to eat in proportion to its live weight, the more it will gain in proportion to the food consumed. If this is true, the aim of breeders should be to produce animals that are "great eaters"—and, of course, they should also aim at the same time to reduce the offal parts, so that nearly all the food shall be turned into valuable meat.

For the first two weeks it took only 7½ pounds of milk to produce one pound of increase, and for the next two weeks, 11 pounds, or 46½ per cent. more. This is an enormous falling off in the meat-producing power of the food, and as the pigs grow larger there would doubtless be less and less increase from the food consumed. And this is really the point which we wish to ascertaln experimentally.

The experiment terminated August 18th. The best pig of the three was then five weeks and four days old, and weighed 24¾ pounds. He was then gaining at the rate of 28 per cent. per week. Although no record was kept of the amount of food consumed, the pig was weighed at the end of the week, (August 25th,) and and weighed 29¾ pounds. This is a gain for the week of 20 per cent. He was not weighed the next week, but was was the week after, (September 8th.) He then weighed 45¾ pounds. This is also a gain of a little over 20 per cent. per week. Now, if he could be kept on growing at that rate, he would weigh the next week, (September 15th,) about 57 pounds, and the next, (September 22d,) 71 pounds, and the next week, (September 29th,) 89 pounds. He would then be between ten and eleven weeks old, and would probably dress, if as fat as such a rapid-growing pig must be, about 65 pounds. If we keep him longer than this, the proportion of increase will rapidly grow less. This very hog, at 5½ months old, weighed 154 pounds; which, if we assume that he weighed 89 pounds when 11 weeks old, is a gain of only between 4 and 5 per cent per week.

Only give us a breed of pigs that will gain for ten or eleven weeks, in proportion to live weight, as rapidly as this one gained for eight weeks, and nothing more could be desired, so far as the supply of

fresh pork is concerned. In London, the pig most in demand by the butchers, and most profitable for the farmers, is one dressing between 60 and 70 pounds.

The real point I want to enforce is this. It takes same 75 per cent. of all the food an ordinary animal eats to keep him alive, and the increase is derived from the other 25 pounds. Now, if you can get him to eat 125 pounds, or only one-fourth more, you double your increase; if 150 pounds, you get *three* times the increase, and with 175 pounds, *four* times, and with 200 pounds, *five* times, while your food is only doubled. Now, will not a little, well-bred pig, eat as much again in proportion to live weight as he will at an older age, and will not he consequently give more than double the increase in proportion to the food consumed? And if this is so, should not our aim be to get animals having immense digestive powers embodied in a small frame? I believe breeders have never turned their attention to this point.

In Mr. Lawes' experiments on the "Comparative Fattening Qualities of the Different Breeds of Sheep," the sheep that gained the most on the same kind of food had the *largest stomachs*. Thus, of 20 Cotswold sheep, the five that gained the most were found, on killing them, to have stomachs weighing on the average, 4 lbs. 14¾ oz.; while the stomachs of the five that gained the least averaged only 4 lbs. 4¾ oz.

Of the Leicesters' the four that gained the most had stomachs averaging 4 lbs. 1 1-5 oz.; and the four that gained the least, 3 lbs. 2 1-5 oz.

Of the Hampshire Downs, the four that gained the most had stomachs averaging 4 lbs. 8½ oz, and the four that gained the least, 3 lbs, 8⅓ oz.

Of the Sussex Downs, the four that gained the most had stomach weighing 3 lbs. 4 oz., and the four that gained the least, 2 lbs. 11½ oz., and so it was in other cases which I have not time to mention.

You say that this would naturally be so; that the sheep that gained the most were the largest animals, and consequently had the largest stomachs. But while this is true of the sheep at the termination of the experiment, it was not so when the animals were put up to fatten. And this is the real point. Thus, at the commencement of the experiment, the five Cotswold sheep that afterward gained the most weighed 122 lbs. each, and the five that gained the least, 123 lbs. At the end of the experiment the latter weighed 167 lbs. each, and the former, 202 lbs. So much for big stomachs! To anticipate another objection, I may add that the dressed weight of the five that gained the most was 117 lbs. each, and that of the five that gained the least, 93 lbs.

In Mr. Lawes' Pig Experiments, one of the pigs, considered a fair representative of the others, was killed at the commencement of the experiment. His "fasted" live weight was 94 lbs.; carcass, 62½ lbs. The stomach of this pig weighed 1 lb. 3.03 oz.

After the pigs had been fattened for ten weeks, another pig of the same litter was killed. His fasted live weight was 185 lbs.; carcass 140½ lbs. The stomach of this pig weighed 1 lb. 3.48 oz.—less than two-tenths of an ounce more than the pig killed 10 weeks before. The older pig weighed nearly as much again as the other, (and dressed 226 per cent. more,) and yet the stomach was no larger. You can draw your own conclusions from the fact. To me it seems to confirm the views I have endeavored to set forth.

We have a cheese factory in successful operation here in the wheat district, and another is about to be established. This is what I have always wished. I do not see why we cannot make as good cheese here as is made in Herkimer County or the Western Reserve. We can raise just as good grass, and more of it. With plenty of wheat, barley, and oat straw, corn stalks, pea and bean haulm, and clover hay so abundant that many farmers still plow it under for manure, we can winter our cows much cheaper than in the dairy districts. On my farm I can winter three times as much stock as I keep through the summer. In the dairy districts, where the farms are devoted almost exclusively to grass, and where, consequently, the cows must be wintered principally on hay, the number of cows to be kept must be determined by the ability of the farmer to carry them through the winter.

The cost of feeding a cow on hay

through the winter must form a large item in the expense of keeping a dairy, and yet it is strange that nearly all our writers on dairying say little on this point. They give us very minute directions as to feeding the cows in the spring, after they come in, but say nothing in regard to feeding them during the winter. And yet it seems to me the latter is, if anything, the more important point. The cow needs to accumulate strength during the winter to enable her to stand the great strain on her constitution during calving, as well as through the long period of milking.

A cow will eat 3 pounds of hay a day to each 100 pounds of her live weight. If she weighs 800 pounds, she will eat 24 pounds of hay, or 168 pounds a week. If fed on hay alone from December 1st to May 1st, (22 weeks,) she would consume 3,696 pounds. A cow weighing 1,000 pounds would eat in the same time 4,620 pounds, or a little over 2¼ tons. Horsfall, the best authority we have on feeding dairy cows, says it requires 20 lbs of hay a day for the maintenance of a store cow. In other words, it takes this amount merely to support the vital functions—the cow will give no milk, nor increase in weight. She will merely live. According to this, it requires a little over a ton and a half of hay to keep a cow from December to May without getting anything in return. When cows are fed three per cent. of their live weight, of good hay, per day, we may reasonably expect more or less milk, or an increase in flesh or fat.

If it takes 20 pounds of hay a day to keep a cow alive, we should never forget that *all* our profit comes from the food the cow consumes over and above this amount. Mr. Horsfall had a cow that, for the sake of the experiment, he fed on hay alone. She was a rather small cow, but noted for her usefulness as a good milker. At the time of calving her third calf, November 12th, she was in rather high condition, and gave 17 quarts of milk a day. On the 1st of January, at the commencement of the experiment, she weighed 980 pounds, and was giving 15½ quarts of milk a day. She was allowed all the hay she would eat, and consumed, on an average, 28 pounds per day. On March 5th, her yield had fallen off to 9½ quarts per day, and the cow then weighed only 896 pounds—a loss of 84 pounds. On the average, during the experiment of nine weeks, she gave 12½ quarts per day.

Another cow fed according to Mr. Horsfal's system on steamed food, gave 18 quarts per day at the time of calving, October 8th, and at the commencement of the experiment, January 1st, 15½ quarts per day. She then weighed 1092 pounds. She gave, on the average, 14 quarts per day, and at the end of the experiment weighed 1176 pounds—a gain of 56 pounds.

Mr. Horsfall figures up the result as follows:

No. 1.	Average yield of milk per day 12½ quarts, @ 4 cents	$3.50
	Deduct loss of flesh, 9⅓@12c...	1.12
		$2.38
	28 pounds of hay per day, @ $17.14 per ton	1.68
	Profit per week	$0.70
No. 2.	Average yields of milk per day 14 quarts, @ 4 cents	$3.92
	Gain of flesh 6¼ lbs., @ 12 cts.	75
		$4.67
	Hay, 63 lbs. ℔ week 54c.	
	Straw & oat shells...30c.	
	Mangel wurzel.....24c.	$1.08
	Rape-cake, 35 lbs.; Bran, 10½ lbs; Malt combs, 10½ p'nds; Bean meal, 10½ lbs..... 97	2.05
	Profit per week	$2.62

"The richer quality of the manure," Mr. H. well observes, "will probably compensate for the extra labor, cooking, and attention bestowed." The profits from the cow fed on hay are 70 cents per week, while from the cow fed on rich food they are $2.62 per week. It is true, if we take merely the cost of the food and the value of the milk, the profit from the two cows is nearly identical, or $1.82 from the hay-fed cow, and $1.87 from the high-fed cow. And there are many people who would figure in this way. They would leave out of the question the gain or loss of flesh.

The 9⅓ pounds of flesh which the cow lost per week either went to make milk or to support the animal. It was equivalent to a certain amount of food. Thanks to the investigations of Lawes and Gilbert, we know what this flesh which an animal lost is composed of, or, at all events, we know what the flesh which an animal

gains is composed of, and we may well suppose that within certain limits they are identical.

One hundred pounds *increase* of beef cattle is composed of:

Water	24.16	pounds
Mineral matter	1.47	"
Nitrogenous compounds	7.69	"
Fat	66.2	"

Now it is very evident that 12 cents per pound is rather a low estimate of the value of such animal food.

The *carcass* of a half-fat ox is composed of—

Water	54.00	per cent.
Mineral matter	5.56	" "
Nitrogenous compounds	17.8	" "
Fat	22.6	" "

Even the carcass of a "fat ox" contains 45.6 per cent. of water; and such beef sells in New York for 17 cents per pound, and I think it would not be difficult to show that butchers and consumers really pay us from 20 to 25 cents for every pound of *increase* we put on a well-bred, half-fat ox. What does a thin steer sell for in New York, and what a fat one? I have frequently seen "extra" cattle quoted at 18 cents, and "inferior" at 8 cents. But let us assume that a "half-fat ox" brings 12 cents per pound, "estimated dressed weight for the four quarters," and the "fat ox" 17 cents. The "half-fat ox," analysed by Lawes and Gilbert, weighed, alive, after fasting, 1232 pounds; the carcass, 797⅜ pounds. At 12 cents per pounds, he would bring $95.73.

The "fat ox," analyzed by Lawes and Gilbert, weighed, alive, after fasting, 1419 pounds, and dressed 939½ ponds. At 17 cents per lb. this ox would bring $149.71.

Now, the difference between the two, in live weight, is 187 pounds. One was kept fatting till he had *increased* 187 pounds more than the other. Mr. Horsfall reckons this increase of flesh at 12 cents per pound. What do the New York butchers estimate it at? At 12 cents per pound, it comes to $22.44. But the butchers will pay $95.73 for the one animal, and $149.71 for the other. In other words, they pay for this 187 pounds of increased live weight $53.98, or over 28¾ cents per pound.

This 9⅓ pounds of flesh which the cow lost each week would contain over 6 pounds of fat, equivalent to over 7 pounds of butter. There is no record of how much butter the 12½ quarts of milk contained, but it would be of full average quality if it gave a pound a day, and consequently the whole of the butter obtained might have come from the fat storen up in the cow previous to calving. But this 9⅓ pounds of flesh, so called, would contain only about 12 ounces of nitrogenous compounds, while the milk obtained during the week contained probably six or seven pounds. Nearly the whole of this must have come from the food. And this will account, in some measure, for the well known fact that milch cows require a more nitrogenous food than fattening animals.

But excuse me. You have been out in the cold all day, and I know that a warm stove and a talk about "nitrogenous food" will put any farmer to sleep.

The matter has, however, a very important practical bearing, and a *young* farmer, at least, should make himself acquainted with the subject. The old people may be excused. It is just as easy to learn the difference between nitrogenous food and carbonaceous food as it is to learn the difference between haw and gee. But I will not use the terms any more than is necessary. In short, it may be said that theory and practice both indicate that it is more economical to feed milch cows high enough to enable them to give all the milk they can secrete, and to lay on fat at the same time.—*American Agriculturalist, vol. 26, pages 440 & 442.*

A CORRESPONDENT of the *Practical Farmer* says that his experience shows that two quarts of cooked potatoes would do as much toward fattening as four fed raw, and that the value of corn meal is very nearly doubled by thornugh cooking. He considers raw potatoes almost valueless for fattening.

HINTS.—Many horses are made vicious from cruel treatment.

When a horse falls he is more frightened than his rider.

More horses fall from weariness than from any other cause.—*London Horse Book.*

Inquiries and Answers.

EUREKA, KANSAS, Jan. 29, '69.

Ed. So. Ruralist.—I wish to go South next fall, and I want to get some information before I go, if I can.

What is land worth—generally?—1.

Is it a good country for fruits, and what kinds flourish best?—2.

Are there any nurseries near you, and what would be the prospects for one?—3.

Are Northern men allowed to live there in peace?—4.

There are quite a number of gentlemen who want to go South as soon as things get quieted, a list of the names I send you below.

Respectfully yours, &c.,

M. E. STEMPLE.

REMARKS.—As the above is a sample of letters frequently received from our Northern neighbors, we deem it proper to answer the inquiries through the columns of the *Ruralist*, which we will do in the order in which they occur.

1.—Lands are worth from one to fifty dollars an acre, depending upon quality and location. They are from 50 to 100 per cent. cheaper than they were before the war; but they are now gradually rising in value. Farm lands along the lines of our railroads, of fair quality, range from five to twenty dollars; river bottoms, where navigation is good, have a wider range.

2.—Fruits of nearly every variety flourish well in the South—though not all in the same section. In the extreme South, the orange, lemon, fig, banana, Japan plum, the peach, &c., &c., flourish as in the land of their nativity; while in the more northern latitudes of the South, the pear and apple succeed to the satisfaction of those who cultivate them. The small fruits succeed throughout the South, generally.

3.—There are quite a number of nurseries in the South; but a mere sprinkle compared to the number in the Northern States. The constantly increasing interest in Southern fruit growing, holds out a promising future to nurserymen, and this field of industry with us is by no means crowded.

4.—The fourth inquiry of our correspondent sounds funny, at least to us of this section. The Northern man who comes among us to assist in building up our waste places by pursuing any of the numerous branches of industry, is not only as safe from violence as when swinging to the string of his mother's apron—but he receives the hearty "god-speeds" of as generous a public as he has ever before known.

The impressions on this subject, made upon the Northern mind by mendicant politicians, is as ridiculous as it is pernicious.—*Ed. So. Ruralist, (Miss.)*

POSTAGE ON SEEDS, &C.—Seeds, vines, grafts, &c., can be transmitted by mail, very cheaply and safely, if not exceeding the limitation prescribed with regard to the weight of the package. Postage must be pre-paid by affixing stamps for the proper amount, according to the following rates: "On one package to one address, not over four ounces in weight, two cents; over four ounces and not over eight ounces, four cents; over eight ounces and not over sixteen ounces, eight cents; over sixteen ounces and not over thirty-two ounces, sixteen cents—thirty-two ounces being the heaviest weight allowed to pass through the mails. No writing of any kind can accompany the package; if it does, letter postage will be charged. The character of the contents of the package should be marked on the outside—whether seeds, vines, &c."

[The above is taken from Moore's *Rural New Yorker*.—ED.]

HASHEESH, or *hashish* as the orientals call it, has long been an important article of Eastern commerce, and more than one brilliant pen has described its magical effects upon the imagination. The tempo rary extacies it has communicated to millions of poor mortals have been a thousandfold counterbalanced by the prostration, mental and phisical, that inevitably follows the practice of using it. As the Chinese government strove desperately at one time to check the importation of opium, so does the Viceroy of Egypt now prohibit the use of *hasheesh* under the severest penalties. He is a sensible and progressive prince.

NEVER strike an animal upon the head.

[From The Southern Planter and Farmer.]

An Example of Rotation of Crops.

We are frequently asked some very embarrassing questions. Without knowing more of the means and circumstances of the querist than we do, and without knowing much of the relation of the subject to surrounding circumstances that ought to influence the answer, we find ourselves called on for advice, when to give it judiciously would puzzle sounder counsellors than we can pretend to be.

This is most frequently the case with persons wishing to know what is the best rotation of crops.

The most important consideration connected with the whole subject is to be found in the pithy observation of a late friend of ours from the county of Rockingham, a gentleman who made all his money by his land; and starting in debt, became, at the age of fifty, the largest land owner in his county. "A rotation," he once remarked to us, "is a very good thing for a fool, who will break his neck if he gets off the beaten track; but all a man of sense wants is a convenient division of fields, which he will then crop or graze according to the fitness of things."

But even this remark requires modification; for as the land improves, or circumstances change, the fields will require subdivision, or possibly enlargement.—Thus we have known a gentleman who, beginning with a rotation of four fields, was induced gradually to enlarge his system to five, then six, then seven, and lastly to eight fields.

In a word, so much must be left to the judgment of the farmer, that it is perhaps better to state leading principles, and work them out as it were by an example, than to lay down any absolute plan.

The old notion used to be that the same crop or class of crops should not be grown necessarily on the same field. But later practical and more accurate observation shows that in some cases and kinds of crops it is best to do so. For instance, we have often stated, and repeat, that oats may succeed oats in the same land for at least eleven years—our own experience runs to seven—with a progressive improvement of the land; and we have seen in Jefferson county, near Charlestown, the sixth successive wheat crop on the same land, and that crop estimated at twenty bushels per acre.

The propriety of such practices is not now the point, but the fact is stated to show that when other considerations render it expedient, there is nothing in agricultural principles that should forbid it.

The object of all farming is profit; first, and directly, in the revenues that the crops produce; second, in the increased production, and as a measure of the market value of the land; which, as a general rule, may be said to be sold not less than once in every twenty years. Upon a calculation of his life, and supposing him to live for his children as much as for himself, the man who does not seek to increase the market value of his land in our society is a fool, both present and prospective. The true point is to make both profits coincident and progressive. But as, no matter how rich the land may be, naturally or artificially, it will fail to produce its full yield, if not properly cleansed, so that no extraneous vegetation shall rob the crop, we think the final object is that the land shall be cleansed. To do this economically, it must be cultivated in cleaning crops, which should, at the same time, be made to pay a profit on the cost of cultivation.

This being attained, the next point is to cultivate crops of such kind as will yield most in proportion to the labor employed to procure them. But it must be remembered that this labor is represented not only by that bestowed manually in the growth of the product and its preparation for market, but also by the cost of transportation to market. Thus a man may grow tobacco in one place when it would be folly in another man differently situated to attempt it; one man may grow hay for market, when another man would be brought in debt by it, yet ought none the less to have grass. These disadvantages, though, will be found to have more or less of compensation in the greater economy in the purchase of foreign, or the application of home made, fertilizers; and, in Virginia, will ultimately come to be represented by the price of lands; whose relative values are now so far reversed that those farthest from market actually sell for the most money.

But it may so happen that the land may have certain preferences for the kind of crops grown. It may, for instance, be good for clover and grass, but not so well adapted to grain; or very fine for corn, but not good for wheat. These and all other idiosyncracies the farmer must of course know and provide against. Still our general principle will be found to run through nearly all soils except barren sands and very rich alluvions, and that is, that they require for their highest development an alternation of grain and grass.

With these preliminary remarks we submit for examination the following formula, to which we invite criticism. It is assumed as a fair average production of fair land under the system prescribed. We know that it meets the experience of our own farming as to every item, though we have never ascertained them in this precise rotation, which we did not practice before the war, because the land was not in order for it; nor since the war, for want of funds. It will be observed that the value of each crop per acre is stated, though it must be borne in mind that the profit is very different; thus the timothy hay crop is valued at $40 per acre, whilst the corn crop is put, including the shucks, at 44.80. But when the difference in labor and exhaustion of land is considered, the preponderence will be greatly in favor of the hay.

We have stated the values in this market, and we have made no allowance for the freight, because that varies in each locality, and the intelligent reader will make the proper corrections to adapt it to his own case.

We have omitted the cost of teams, because they are supposed to be already provided; and we make no estimate for feeding them because of the different value of forage in various places.

For the same reason we give the value of the bought manures in this market. We have also restricted ourselves to the standard manures now in use, and have omitted all notice of the potash manures now coming into vogue, because they have not yet been sufficiently introduced, and because when they are, they can substitute an equivalent value in the fertilizers specified. We specify lime because it suits tidewater Virginia; but its value can be invested in other things better suited to the upper country.

We know that in some cases cleansing crops must precede the introduction of the small grains and grasses to a greater extent, perhaps going as far in some cases as three hoed crops in succession. These and many other things must be left to the judgment of the reader. But the main point remains, and that is that with capital judiciously employed in manures properly applied, there is to-day more money in agriculture than in any other business we know except *shaving;* and there is far less risk than in that. Assuming the land in the case supposed to be worth $100 per acre, then the advance for manures, $1,443.73, is only about 5 per cent.; whereas a man with his capital employed in commercial pursuits requires for its highest development a capital never less than 25 per cent., and frequently exceeding 50 per cent.

But really land capable of such results is worth generally in market very much less, which is all the more in favor of the investment.

The next question is, How can the money for such investments be had? This, as the present article is long enough, we propose to consider in the next number of our paper. It is entirely practicable if our people and legislature would only be *practical*, which is the weak point in our case; for of all people, ours we fear are the most unpractical; and if future legislatures are no wiser in such matters than our past have been, why then God save the Commonwealth.

With these remarks we submit our example of rotation of crops:

Estimate of Products and cost of Working 300 Acres in Eight Fields.

PRODUCTS.

1. 37½ acres corn and 200 lbs. Phos Peru Gua — 300 barrels.
2. 37½ acres oats and 400 lbs. Bone Dust..... — 93,750 lbs. in sheaf
3. 37½ acres clover and 10 bus. of lime..... — 75,000 pounds.
4. 37½ acres wheat & 400 lbs Phos Peru Gua — 750 bushels.
5. 37½ acres timothy and 10 bus of lime.....150,000 pounds.
6. 37½ acres timothy and 10 bus. of lime.....150,000 pounds.
7. 37½ acres timothy and 10 bus. of lime..... 150,000 pounds.
8. 37½ acres timothy and 10 bus. of lime.....150,000 pounds.

VALUES.		
300 bbls. of corn, at $5 per bbl., or $40 per acre		1,500 00
93,750 lbs. of oats, at $1 per 100, or $25 per acre		937 50
75,000 lbs. of clover hay, at $1 per 100, or $20 per acre		750 00
750 bushels of wheat, at $2 per bushel, or $40 per acre		1,500 00
4 crops timothy hay, at $1 per 100, or $40 per acre		6,000 00
1,800 lbs. shucks from corn, at $4 per 100, or $4.80 per acre		180 00
		$10,867 50
MANURES.		
200 lbs. Phos. Peru. Guan. at 3½ cts. per lb. on 37½ acres	262 50	
200 lbs. Bone Dust, at 2½c. per lb. on 37½ acres	375 00	
400 lbs. Phos. Peru. Guan. at 3½c. per lb. on 37½ acr	525 00	
Lime for 5 crops, 10 bus. each at 15c. per bus. on 37½ acres, each crop	281 25	
	1,443 75	
LABOR.		
6 hands, (including extra hands,) at $240, (not estimating horses,)	1,440 00	
		2,883 75
Net proceeds		$7,983 75

Cost of bought manures	$4.81	per acre.
Cost of labor	4.80	"
Gross produce	36.26	"
Net produce	26.65	"

Why Farmers Should be Thoroughly Organized.

The following we extract from a very able address delivered before the Minnesota Agricultural Society at the State Fair, Sep. 30, 1868, by Col. D. A. Robertson, of St. Paul, Minnesota:

With the exception of husbandry, every money-making interest, in this our age of money, is thoroughly organized, and ever ready for aggressive or defensive action, as the occasion may require, whether in legislative halls, in boards of direction, or in the market place.

Our farmers are the most important working population of the country and produce three-fourths of its productive wealth. Out of their toil and products are directly or indirectly obtained, most of the taxes and yet they are at the mercy of all other interests. A projected measure that would transfer millions from the profits of agriculture into other's hands may be resolved upon by half a dozen wealthy gentlemen, of elegant enterprise, seated in a private parlor or around a board of direction, without exciting any more concern among our farmers than if the subject matter related to China or Japan.

The reason is our farming populations are cut up into isolated fragments, and are beaten in detail, in politics and in every thing else.

Such facts as have been adduced show the importance and necessity of organized societies, and like new order, the Patrons of Husbandry, with frequent meetings and wide extended fraternity, for collecting and disseminating valuable information, and for mutual instruction and defence. Unlike the rural peasantry of Europe, our farmers own the land they cultivate. They are capitalists, freeholders, citizens and rulers of the state and nation They are, or ought to be, men of thought, reading and useful knowledge, as well as of manual work.

All other interests are armed and constantly on a war footing. Among the powerful nations of Europe, when one arms, all must arm. So it is in all communities. When every interest is cared for, when every interest is prepared for defense, all are cared for. Then there is justice, equity, peace and prosperity for all.

How to Keep Butter Sweet.—It is the easiest thing in the world. Simply put it in clean jars, and cover with a strong brine. This will keep pure butter a year, fresh and sweet, as we know by experience. It is almost equally good to put in oak casks, headed tight. This is equivalent to canning fruit. The brine, in the case of the jar, acts as a heading, keeping the air out. But butter should be made well; we have never experimented on poor butter. Work out the buttermilk till you have only pure 'beads' clear as rain-water; but do not work so much as to break the grain, in which case you have a tough, heavy article in winter, and grease in summer. Such butter we advise no one to try to preserve.—*Cor. Rural World.*

Florida is going into the grape culture.

Home-Made Fertilizers.

Prof. James Higgins, of the Maryland Agricultural College, (late State chemist) recently delivered before the Anne Arundel County Agricultural Society a lecture on the subject of home-made fertilizers, from which we extract the following. It will be found of interest to most of our readers:

Concentrated Fertilizers now comprise almost exclusively Peruvian Guano, Bone Dust, and various Phosphatic Guanos, valuable for the Phosphate of Lime contained in them. From these latter are manufactured in greater or less purity the class of manures known as "Super Phosphates." I will not detain you with the peculiar and distinctive qualities and composition of the various Photphatic Guanos that are now sold in our markets, nor with the composition of the "Super Phosphates," some of them such only in name; my end, aim and purpose is to give you such practical instructions as will enable you to prepare for yourselves a *cheap* and *efficient* manure, one vastly superior to the average of those sold in our markets, and at much less cost. No expensive machinery or implements are required and no more skill than is requisite to mix clay to fill in a house, or the mortar used in the plainest building. I say this with the knowledge of the facts. Many persons now make their own Super Phosphates and at a cost justifying what I have said, after giving a liberal allowance for labor. When I inform you that some of the best *looking Super Phosphates* "so called," that have been sold in our markets contained by actual weight eighty-seven per cent. of sand, were sold at sixty-five dollars per ton (2000 lbs.) in large quantities, and between this and those which are made in good faith and with good and proper materials there are regular gradations, you must know how liable you are to obtain an impure article, even if the experience of many of you has not already given you proof of the fact.

This much as to the *purity* of the Super Phosphates that you buy—now as to *their cost.* This is from fifty-five to sixty dollars per ton, *freight* not included. I now speak of that which claims to be nothing more than Super Phosphates, not the "Ammoniated" articles which are sold at a higher figure. I know that I am within bounds, when I say that five hundred lbs. of oil vitriol costing less than four cents per lb. and one ton (2000 lbs.) of Navassa Guano costing twenty dollars, to which should be added say five hundred lbs. of common salt, costing $3.75, when properly mixed will make a better Super Phosphate than the average of those which you buy. Consider that for about forty-four or at most forty-five dollars, you prepare for yourself one ton and a half of manure, that if you purchase already manufactured, you have to pay for at the rate of fifty-five dollars per ton. These figures may not be exactly correct, as the price of the articles which I have named, are subject to some variations, but of this be certain, that by *manufacturing for yourselves you can always assuredly save more than twenty dollars per ton.* If you purchase bone dust, your home-made Super Phosphate will cost you more, but then you will get a better article. The same is true of a Phosphate of Lime made of finely ground antediluvian bones from South Carolina, of which large quantities are now offered for sale in Baltimore. It is true that you are liable to purchase an inferior article of Phosphatic Guano or of Bone Dust, but the danger of loss in this respect is not so great as when you purchase the "Super Phosphate" already manufactured by the dealers in this manure. There are not the same temptations to adulterate the raw material as the manufactured article, and these adulterations are more readily detected.

The quantity of acid to be used when bone dust is to be converted into Super Phosphate of Lime is, in round numbers, twenty-nine pounds to the one hundred pounds of bones. This quantity would convert all the Bone Phosphate of Lime, into Bi-phosphate of Lime, but much observation has led me to doubt if this be the most economical quantity in practice, and I would therefore recommend that a less quantity than this be used, say from four to five hundred pounds of acid to the ton of Bone dust. It is true that this is not sufficient to make all the Bone Phosphate of Lime a Super Phosphate of Lime, some will remain undecomposed, but this

will more slowly become soluble by the action of water in the soil impregnated, as it necessarily must be, with carbonic acid and by the presence of ammoniacal salts, present in all soils, and in greater quantities where Peruvian Guano has been drilled with the seed at the time of sowing than elsewhere.

The bone dust not acted on by the sulphuric acid will thus afford a supply to plants in the latter stages of their growth, and, if not all consumed by the crop to which it is applied, will be in most fit state and condition to benefit succeeding crops.

If the Navassa Guano be used, from four to five hundred pounds of common salt should be *well mixed* with it before the acid is applied. If you gentlemen possessed any certain means of ascertaining the composition of the different Guanos sold in our market without having the analysis made for yourselves, I would give you precise directions as to the quantity of acid to be applied to each in order to render them soluble as super phosphates; in the absence of this knowledge, you should use from four to five hundred pounds of the acid to the ton (2000 lbs.) of Bone Dust or Phosphatic Guano. In the selection of this Guano (if you cannot or will not use the Bone Dust,) take every *possible* precaution to purchase that which contains as little of the Carbonate of Lime (air-slaked lime) as possible. When the Guano contains this, your acid will be expended in converting this into the Sulphate of Lime (which can easily, as you know, be cheaply purchased in the markets) before it begins to form the Super phosphate of Lime; the substance which you are desirous of making.

So far as to the substances required to make a Super phosphate. I now propose to give you plain and precise directions for handling and mixing the substances of which it is made. If there be any doubt as to the directions or any want of clearness in the way in which I have given them, I will, with pleasure, give every additional information in my power if applied to in person or by letter at the Maryland Agricultural College.

Materials to be Used.—Bone Dust finely ground one ton (2000 lbs.); Oil of Vitriol four hundred pounds. Take the Bone Dust and place it two or three heaps on the floor of a tobacco house, barn or shed, any place where the rain will not fall on it, and moisten the Bone Dust with water until it is quite damp. Then take the Sulphuric Acid (oil of vitriol) and pour it on the Bone Dust. As soon as this is done, the heaps should be well stirred with a wooden shovel or paddle. As soon as the acid is applied, a good deal of heat will be produced, and watery vapor will fly off from the heap. The heap should be well stirred every day for about a week, and then suffered to remain until it is wanted for use. It then should be again two or three times well stirred; and if there be any lumps or pasty masses in it, these should be mashed with a hammer or in any convenient way, and be reduced to as fine a state as possible. From exposure to the air and by the heat generated by the application of the acid, the mass will be dry enough (if made for a few weeks) to be handled and applied broad cast to the soil.

If it should be too damp to be well applied, then mix with it some dry sand, wheat chaff, corn bran, sawdust or some such substance, but *not* ashes, nor lime nor plaster.

Should Bone Dust be unattainable then procure some of the Phosphatic Guanos, but the supply of Columbian and Mexican, the best of this class, are almost, if not entirely, exhausted. You may therefore procure the Navassa Guano, which can be had for eighteen or twenty dollars per ton, and of this Guano the great majority of the Super Phosphates have been made, and for which you have been paying at the rate of fifty-five and sixty dollars per ton.

Take one ton of it (2000 lbs.), mix intimately with five or six hundred pounds of salt, then treat it as you have been directed to treat the bone dust, *i. e.* add slowly and cautiously from four to five hundred lbs. of the oil of vitriol, first moistening the mass, stirring it well so as to make in uniform and thorough mixture, and you will have a Super phosphate at the cost of less than thirty dollars per ton, at least equal to many of those for which you have been paying from fifty to sixty dollars per ton, and very much superior to some of them. Be not discourrged if you do not succeed in

making a *good looking* article at first, if you comply with the directions given, you will make a *good* article. You will have your Phosphate of Lime in a *soluble* condition, and that is the *end* and *aim* of making a Super phosphate.

When the Super Phosphate of Lime is applied to the soil, the first rain dissolves it and distributes it thoroughly in the soil, where meeting with particles of lime in the condition of air slacked lime, it unites with it forming again Bone Phosphate of Lime, but in such a state of division as to be readily soluble by agencies acting on it in soils. The finer the state of division the more thoroughly a manure can be mixed with the soil and the greater will be its efficacy; and be certain of this that in this first respect the finest ground bear no manures comparable with the Super Phosphate of Lime. Instead of putting your Bone Dust or Guano in a heap, you may mix it in a wooden trough like a cider trough, or if you have a tough strong clay, dig a hollow pit in it, and apply the acid as I have directed. Be careful in handling the acid, as it will burn the flesh or destroy the clothes, when it comes in contact with them. It can be poured from the carboys, which it is brought in, to any kind of crockery vessel having a handle for convenience, and thus be used without any fear or injury.

I know of persons in the State, the best and most successful of our farmers, who have been making their own Super phosphate for years with entirely satisfactory results, and at a cost, *labor included*, not greater than that which I have mentioned. *Use no other substances with your superphosphates other than those I have mentioned.* To your grainery apply your Super Phosphate of Lime *broad cast* and *drill* in with your grain from seventy-five to one hundred pounds of good Peruvian Guano. To your corn and tobacco a small quantity of Peruvian Guano in the hill, not more than fifty pounds to the acre, with the Super phosphate broad cast on the land.

By doing as I have mentioned, you will have a manure equal to the best that is now sold, and at a less cost. Again I say, be not discouraged at any *seeming* want of success in your first attempt, for it will be more *in appearance* than reality; but persevere. In the end you will come out right, and reap the reward of your labor in your crops and improved land; in the greater certainty of using a finer manure, at a far less cost, than you now employ. Again I say, that if any difficulties present themselves in your manufacture, I will, with pleasure, afford you all of the assistance in my power.

How Fish Guano is Made.

There are fishing-grounds at intervals on the Atlantic coast, from Maine to Carolina, where the fish known as Menhaden are caught with seines, in immense quantities. The fish weigh about a pound a piece, and about twenty thousand of them are put at a time into a large tank, where they are cooked by steam. The water is then drawn off, and the par-boiled mass of fish is put into the cylindrical curb of a hydraulic press, and the oil pressed out. The mass yields, as a general rule, from one hundred to one hundred and twenty gallons of oil, which is used in a manner similar to other animal oil. The refuse left in the curb is broken up, pressed over again, and afterward put up in barrels or bags for the market. In this crude form it contains a considerable quantity of water, and of late manufacturers have produced a much superior article by drying the crude material, and then crushing or grinding it into powder.—*Rural Gentleman.*

THE KITCHEN is more important than the parlor. It should be kept perfectly clean, well lighted, properly ventilated, and supplied with necessary conveniences. Dry wood and a brisk fire, and an abundant supply of soft water, will greatly facilitate the labor of housewife or servants.

RANK animal manures are not so good in a garden as lime, salt, clay and vegetable manure. Lime corrects acidity, makes mellow and sweet the garden stuff, and is good generally.

NEVER kick nor scream at a horse, nor jerk the bit in his mouth.

Carving and Helping at Table.

It is considered an accomplishment for a lady to know how to carve well at her own table. It is not proper to stand in carving. The carving knife should be sharp and thin.

To carve fowls, (which should always be laid with the breast uppermost,) place the fork in the breast, and take off the wings and legs without turning the fowl; then cut out the merry thought, cut slices from the breast, take out the collar bone, cut off the side pieces, and then cut the carcass in two. Divide the joints in the leg of a turkey.

In carving a sirloin, cut thin slices from the side next to you, (it must be put on the dish with the tenderloin underneath,) then turn it and cut from the tenderloin. Help the guest to both kinds.

In carving a leg of mutton, or a ham, begin by cutting across the middle to the bone. Cut a tongue across and not lengthwise, and help from the middle part.

Carve a forequarter of lamb by separating the shoulder from the ribs, and then divide the ribs.

To carve a loin of veal, begin at the smaller end and separate the ribs. Help each one to a piece of kidney and its fat. Carve pork and mutton in the same way.

To carve a fillet of veal, begin at the top, and help to the stuffing with each slice. In a breast of veal, separate the breast and brisket, and then cut them up, asking which part is preferred.

In carving a pig, it is customary to divide it and take off the head before it comes to the table; as to many persons the head is revolting. Cut off the limbs and divide the ribs.

In carving venison, make a deep incision down to the bone to let out the juices, then turn the broad end toward you, cutting deep, in thin slices.

For a saddle of venison, cut from the tail toward the other end, on each side, in thin slices. Warm plates are very necessary with venison and mutton, and in winter are desirable with all meats.—*National Agriculturalist.*

"Old Fields."

It is as much the duty of farmers who cultivate virgin or good soils, to practice the policy of furnishing it with all the food that is necessary to produce good crops, as it is to feed a fat horse, if they consult their interest. It is equally their duty to supply the exhausted "old fields" with those properties necessary for good crops as it is to furnish good food and attention to a horse that is poor from bad management.

Professor Kerr, Geologist for the State of North Carolina, properly characterizes *that barbarous system* that has been so long practiced in this country. He says:

"Our people have carried their method of farming (which consists chiefly in the manufacture of "old fields") beyond the Blue Ridge, and already those glorious mountain landscapes have been extensively marred and scarred by large tracts of these favorite mementoes of our agriculture (*eheu!*) Some of the finest lands on the continent utterly denuded of forest, and of soil half dozen years, and reduced to bare, rocky cliffs, and stone heaps, and steep, glaring gullies—a monument, a beacon, and a frowning curse! No wonder these bald declivities, thus plundered and outraged, send down their destroying floods to ravage the plains. Nature will be avenged on man some way.

I am for levying a tax on all "old fields," as heavy as the Constitution will permit. Indeed they ought to revert and to be declared *ipse facto* forfeit to the State. He who takes an acre of virgin soil which the Almighty has employed all the forces of his universe some thousand years to embellish and enrich; his sun, and rain, and frost, and successive tribes of animals and plants, and chemistry of the stars, to make it "a thing of beauty and joy forever," for the use and enjoyment of his children—he who takes *that* and converts it into a blight and devastation in the shape of an *old field*—what is he but a criminal? No man, no generation of men has an abso-

lute title to the soil in any such sense that he may innocently destroy it. It belongs to mankind, and the reversionary right of posterity to it is indefensible and inalienable, and no individual or generation has, or can acquire any other than a usu-fructuary property to it. He who creates an "old field," therefore, and so "makes a desolation" worse than war can even effect, perpetrates a robbery upon mankind, commits a grand larceny against his own children, "an iniquity to be punished by the judges."—*Report* 1868, *page* 55.

Ploughing up Raw Soil.

We sometimes hear farmers remark that, ploughing deep, they get less grain; that bringing up the new mellow soil, the crops suffer. It would be very strange if this was not the case; for this soil, even if ever so mellow, is raw, just like manure when it is "green" or "long." It is not yet converted or changed into plant-food. It needs just what the long manure needs—to be changed by the heat and the air—that is, decomposed or rotted.

When the top-soil it less fertile than it used to be when the land was first tilled, you may rest assured that this under soil is always better than the upper soil, because the upper has deteiorated, while the under has not, but rather improved.

It is, therefore, inadvisable, nay suicidal in some soils, to turn up deeply the underground in the spring or in the fall at sowing time. The cold, cheerless ground will not help the grain, and were it not for the other soil mixed with it, an almost total failure would be the result.

But turn it up in the fall, and let the frost and the elements take hold of it, and you have another soil; it is turned into manure, a good part of it. A little lime mixed with it, scattered and harrowed in, or manure, or both, would facilitate the process. In the spring sow, either with or without another ploughing, and you will find no more occasion to complain. We have great fertility to draw upon from below, but it requires managing.—*Evening Post.*

Sheep Pasturage in the South.

BY HON. T. C. PETERS.

Stock-breeding must go in that direction where it can be most profitably pursued. The rigors of the winter season, requiring expensive preparations for shelter and a large accumulation of forage for a winter supply of stock, together with the shortness of the pasturing season, are a sad drawback upon the available sources of profit to the Northern farmer. The foddering season north of the Potomac cannot be regarded less than seven months, say from the middle November to the middle of May. There is, therefore, comparatively small space of time that farmers are not compelled to be engaged in preparing and housing food, or in feeding it out to domestic animals. If we have to hire help in doing either, the expense is seriously enhanced.

When the sheep is properly handled, it pays for this outlay much more rapidly than the larger animals, unless they are more available in the dairy. Stall feeding is more or less expensive, and furnishes but a precarious return, by reason of the amount of food consumed in a cold than in a warm season to fatten the animal.

It is therefore evident that the South and Southwest, with a more genial climate, and increased facilities for cheap and rapid transit, must soon become the great stock-breeding centre of the Union.

In no section can animals be kept so cheaply, and as the people begin to diversify their agriculture, and comprehend the great importance of more domestic animals, they will find no competitors in that branch of husbandry. Even before the war, and with no particular thought of their importance, the numbers of cattle, sheep and swine bred in the cotton States bore no insignificant proportion to the whole number bred in the Union. Beginning with a three or four months winter in Virginia and Maryland, finding a month in Georgia, and even less in Alabama, and none in Florida and Lauisiana, and lower or tide-water Texas, the farmers had little trouble to increase their flocks and herds to any desirable extent. The only limit

was in their unskilled and unreliable labor. The habits of the slave, and even the master, were averse to that patient, persistent care which is ever necessary to successful stock husbandry. Some idea may be formed of the wonderful resources which are possessed there when it is known that thousands of head of cattle and hogs are wintered and even fattened, in the cane-brakes which line the rivers and fill the swamps of the whole tide-water region of the South, clear to the Rio Grande. Sheep, with little care, can be kept nearly or quite as easily.

But for the purposes of stall-feeding, no section of the country can begin to compare with the South. To a Northern man, its resources in the production of vegetable matter are perfectly amazing. Then, too, the manure made in the barn-yard has double the value there that it has here. The successful cultivation of cotton depends upon filling the light, quick soil of the South with carbonaceous matter, of which none is so valuable as barn-yard manure. There they require no expensive building, as we do at the North, to practice this species of farming. They require shelter for their animals, it is true, but only such as will keep them out of the rainstorms, which are so troublesome during the winter. Roots can be grown to an unlimited extent and carted at all seasons from the field to the stalls, or fed off with great advantage by sheep, upon the hurdle plan adopted in England, and the ground prepared for corn or for cotton. Cheap cotton can only be grown by confining the cultivation to smaller surface and adopting a system of high manuring with stable-dung and phosphates.

But it may be objected that the grasses cannot be found in the South to make it possible to graze the domestic animals. This is one of the most erroneous of the many erroneous opinions which Northern men have formed of the South. Nowhere can herbage fit for pasturage be produced in greater abundance. Their inevitable "cotton and nigger" system was opposed to encouraging grass. But let one examine a plantation which had been neglected during the planting season, and he would soon discover that there was nowhere such a growth of succulent vegetable animal food, and upon which animals could thrive so rapidly, as in the half-cultivated cotton or cornfield. This very habit was condemned, both by master and man, for it necessitated so much labor to keep the fields clean.

The spread of some of their most valuable grasses, like the Bermuda grass, was fought with the utmost obstinacy. They preferred to see their field washed and gullied into shapeless ravines, to permitting nature to clothe them with valuable and protecting swards. If there were millions of acres, where only sedge and old field pine now, covered with the indigenous grasses of the South, there would be good pasturage for thousands of sheep and cattle where there are none now. I think the propagation of the Bermuda grass will be found a priceless boon to the whole South, and that much of its future prosperity will turn on the abundance of that grass as a pasturage, especially for Sheep. I know this would be called a heterodox opinion by many of the old-time farmers, but still they may change their mind with the changed condition of their agriculture.—*Hearth and Home.*

Delaware Hedges.—A correspondent of the *Bucks County Intelligencer* says of Delaware hedges: "They are allowed to grow untouched for three years, when they are, by means of an axe in the hands of skillful workmen, cut nearly off, close to the ground, and 'laid,' as it is termed: that is, the stems of the trees are inclined and interwoven into a kind of hurdle, about two feet high, which is sustained in an upright position by stakes driven in the ground eighteen or twenty inches apart. The hedge is 'laid' in the spring, and it immediately begins to sucker out, so that by fall a dense growth of new wood makes a complete barrier against cattle. With immense shears, or with a knife somewhat similar to a corn-knife, workmen then go over the whole, lopping off the tops of the branches, when new branches are thrown out below, so that in a few years a hedge is completed, that, to use the words of my host, would turn a rabbit. I never saw anything more beautiful than those living fences."

The Reconstructed Farmer.

JAMES R. THIGPEN, }
JOHN S DANCY, } - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

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This is the Month to Work.

June is the month in which the farmer is taxed to his utmost capacity.

As the crops have all been planted, the chief idea should be to use unremitting perseverance, care and attention.

Corn, cotton, tobacco, gardens, &c., are now to be plowed and hoed; wheat, oats and rye are to be harvested.

If you do not work by some well-regulated plan, success is doubtful, however diligently you may have labored. If you are governed by a well-ordered system, success is not doubtful.

There are men who are good, honest and earnest laborers, but for the want of order in their business are always perplexed; consequently, if they possibly succeed, they have a life in which there is no pleasure. If a farmer by the exercise of good judgment establishes a good plan, farming will not only be profitable, but pleasant. He looks to the end from the beginning: he calculates the amount of labor to be done to accomplish this, that and the other job. He is governed by time and seasons. He never crowds the work that should be done to-day or this month, into next day or the next month.

Consequently, you seldom hear him complaining about this, that and the other failure. Why is this? Because he is governed by a rule which dictates to him there is a time to prepare, a time to seed, a time to cultivate and a time to harvest.

This rule teaches him "whatever is worth doing at all, is worth doing well;" therefore, he never undertakes more than he can reasonably accomplish. This is why you never hear him complaining, as you do his "work-to-death" neighbor, that it is too wet or dry for his crop; because he has, by the exercise of this rule, drained his lands and keeps the drains in good repair. Neither will you hear him rendering any excuse why his stock is in bad order, &c., &c.

This month when harvest time comes, he will be well up with his crop and ready to harvest his small grain, without injuring his cotton, tobacco, &c., in the least. While his hard-working, no-system neighbor will allow the weeds to usurp the profits of his farm.

Farmers, we feel it our duty, this month, to encourage you to work. Work earnestly on the farm with a well-ordered plan; for if there ever was a time when a people should diligently persevere to disenthrall themselves from pecuniary embarrassments, it is now.

If we fail to do our duty this month and neglect the farm, our profits of the crop are lost, however much time and money may have been spent. If you have a son who is curling his mustach preparatory to making some unmeanin

visit, take him to the plow and there learn him the value of a dollar by learning him how to plow. Let no man be countenanced who shirks and loafs about, who has not a competency to live on, whether he be white or black.

Neither let any man despair who once enjoyed wealth and luxury, but is now in the straits of adversity. Think no more of your palaces that were burned nor of your property that was sacrificed by the war. You must endeavor to rise by one determined effort on your part, looking neither to the right or left, or to the rear, but to the front at all times.

Copartnership.

This is a business in which men engage for the purpose of accomplishing certain objects or considerations.

It is very often the case men and women agree to join in copartnership for life as man and wife. The consideration here is, or ought to be, love and affection, one for the other.

It is also very often that men of various pursuits enter copartnerships in which certain profits are anticipated as a consideration. Some farmers join the copartnership each and every year, and strange to say they never profit by experience, for they allow their partners to take all the profits, and sometimes so much more than the profits that their children cry from hunger and cold.

Such farmers know full well when these partners will make their appearance, but for want of order based upon perseverance, care and diligent attention, they are allowed to take possession.

These farmers know these partners neither plow, nor hoe, nor pay any of the expenses of the farm.

Readers, these partners are the spontaneous growth of nature.

Look around within your knowledge and make some calculation as to the amount that is lost by the grass and weeds, and we have no doubt that some of you would be astonished at the amount.

You may make a reasonable estimate as to what is lost by the whole State, by making your county the average.

It has been the custom to hold what is called a "grass-growing association" in Edgecombe county annually, for many years, which we hope will be entirely done away; from the fact, we hope there will not be a sufficient number of farmers in copartnership with the grass to constitute a board of officers. Grass-growers, if you should meet this summer, we request you to inform the RECONSTRUCTED FARMER what per cent. of the crop of the county is lost by the grass.

ACCOUNT BOOK.—Keeping exact accounts is essential to success under every form of business. Farmers who wish to succeed should, therefore, estimate the cost of money, labor and time, from the beginning to the end of the year.

After making the farm debtor to what is supposed to be a reasonable sum, add twenty-five per cent. to the amount for contingent expenses.

Then estimate what the crop will produce under ordinary seasons, at a medium price, and draw a balance. It will not do to over-estimate the production of the crop, nor the value of it; neither will it do to under-estimate the cost to run the farm.

How often it is that men operate large farms, or carry on an extensive business, and to all outward appearances are prospering; while, at the same time, their profits are not equal to their expenses?

Farmers should know, as well as *good* merchants, how they stand annually; and to do this, they must keep an exact account, debtor and creditor.

To Parents.

Parents, we were, in days passed, blessed, as we supposed, in a system of contented laborers, and with that system we were thoroughly acquainted, being educated in it from our infancy.

Through this system of labor our every habit was formed, it being the chief source of revenue to our social and domestic comfort.

A new era has dawned upon us; that labor and social system has been destroyed, and with it the slave of January, 1865, is in reality a legislator for us, instead of his former master who may possess the highest order of statesmanship.

We know we have many causes for complaint, but does this avail us anything? Certainly not. Then let us take a calm and considerate view of our situation, and rather rejoice that these trials came in our day instead of our children's time, for we can raise them to the new situation without much inconvenience to them.

To do this we must educate them differently, not only in the school-room, but in the entire social and domestic circle. We hope you will not infer from this that we are opposed to a classic education. Our object should be to instill in our children the idea that to give them a finished education is simply to prepare them for future usefulness in the various pursuits of life.

When we were rich in negroes we sent our sons (those of the best intellect) to college, and after going through this course we put them to some profession, and generally they did not succeed.

The reason was, their fathers owned in the negro a sufficient patrimony to live on, and consequently no exertion was made by them.

On the other hand, those who were not so well provided for, if they wished to acquire a profession toiled hard, and generally succeeded, for they were dependent on their profession for a livelihood.

We have a sufficiency of professional men to last this generation, consequently educate your sons to develop by science the hidden resources of the agricultural, mineral and manufacturing interest of this country.

It seems that parents and guardians heretofore did not endeavor to make their sons and wards finished scholars, that they might prove as benefactors to their race by that science which is so much needed to a complete development of the hidden wealth of the soil.

It was then, as we fear it will be considered at present, stooping too low to come to the soil and there, with patient practice, demonstrate that farming is a science, by letting us know what properties are wanting in this, that, and the other soil to make it productive of good crops.

Suppose that the educated class of this country for the last quarter of a century had made the same effort to develop the agricultural, mechanical, mineral and manufacturing interest, they have to dupe their countrymen politically; would they have failed? All must confess they might have conferred the greatest of blessings on their country if their talents had been directed in the proper channel.

Teach your children, "by precept and example," that to work in the farm, in the machine shop, or at any laudable pursuit, is honorable. Teach your fair and virtuous daughters that it is not unbecoming "beauty, wit and grace" to learn all the duties of housewifery. Those who have been dispossessed of a luxurious living must not despond, but must join in an humble effort to rise once more, and, by all means, stimulate their children to do so.

No longer look on the past, but forward, hoping, that while your pathway through life is rugged, your children may enjoy a bright future.

Have Your Land Analyzed.

Farmers, we must change our system of hauling such a large amount of compost and using fertilizers on certain lands, when we know from experience that it will not pay us for the labor and money expended.

How often do we hear it said, "I do not know what is the matter with this and that spot; I manured them well, but have failed. Can you tell me what to do, to make these spots produce as good a crop as that field on which I put less manure?"

We are no chemists, but are simple practical farmers, but we know from experience some of these non-productive spots which are often found in eastern North Carolina, especially in the black alluvial soil, may be corrected by marl and lime. We know of many spots of as rich looking land as can be found, that will not produce a paying crop of corn, cotton, oats and wheat, that will produce the finest crop of peas we ever saw

We have some half-dozen acres of this land that neither marl nor ashes will add much to its production, which proves that an abundance of these elements abound.

On these spots we have tried the best of compost from the stalls and then failed. The weed or growth was better, but it failed before fruiting time.

We know everything abounds in this land that is required for the pea, but something in it to produce the other cereals and cotton.

As a large number of the farms in this county are made up of a variety of soils, will it not pay to have each variety analyzed? We think it will.

Therefore let every farmer send a specimen of each and every variety of his soils to some chemist, and thereby learn what properties the soil contains and in what properties the soil is deficient.

We must learn the cheapest modes to keep our rich lands from deteriorating as well as to improve the poor lands and render them productive of heavy crops.

Do not think that all that is necessary is to let lands rest to make them rich; such is not the case. We will admit to let lands rest is an advantage, but at the same time you may let your poor lands rest every other year, for the next century, and these lands will not be much better than at present. For instance, look at the lands that are in a state of forest and have been from time immemorial, which are still naturally poor.

You may clear some of those naturally poor lands and apply those elements of which it is destitute, and the result is a good crop.

Your motto should be to keep your rich lands rich and prosperity will abound in your lands.

We this spring applied (26,000) twenty-six thousand loads of compost on our farm, and we have every reason to believe we have made a misapplication of a portion, as we believe a portion of our compost did not possess all the elements that is required for the full maturity of the crop; consequently, we shall send a specimen of our every soil to Dr. D. M. Buie, of Wilmington, N. C., for analysis.

Practice what You Teach.

We have been admonished to practice what we teach through the RECONSTRUCTED FARMER. This we intend to do to the best of our ability.

Our soil purpose will be to teach that which we believe to be the proper policy to be pursued in our every domestic and agricultural interest.

We expect to teach that it is absolute folly for men to cultivate lands that will not pay the cost of cultivation.

We intend to teach that it is with the

employees to organize a better system of labor than they have at present.

We expect to teach how idlers, skulks and thieves can be forced to some regular employment for a livelihood.

We shall teach it is time the Southerners should raise all the articles of prime necessity at home, for they never will be free until they cease purchasing the many millions of pounds of hay, flour, pork, butter, lard, &c., &c.

We shall teach it is necessary to substitute improved breeds of stock for sorry breeds.

We expect to teach the necessity of raising our children differently in the future from what they were in the past.

We expect to teach the propriety of labor-saving machines.

As the success of all professions depend upon the success of the agricultural interest, we call upon them to assist us by contributing to the RECONSTRUCTED FARMER.

Kitchen Slops, &c.

The slops from the kitchen should not be thrown out at the back door or window, or near by on the ground, as is the case in a great number of families; for this is very unpleasant and nauseating, and no doubt is often the source of disease to the family.

All the greasy slops should be given to the hogs every day. If you do not like to give them to your stock, haul two or three hundred bushels of vegetable mould to some convenient place, and put the slops on this pile. As soon as the pile becomes saturated, haul an addition of one hundred bushels, and put evenly over it.

This heap may be in a circular or square shape, as you prefer; but it should be hollow on the top, so that all the slops will run to the centre when thrown upon it.

If you do not like this, you can greatly improve your gardens by the application of these slops to the vegetables; when the slops are greasy, be careful not to wet the leaves of the plants in the application.

The suds from the laundry should be used in the manner above described. The rinsings from spittoons, and the urine from bed-chambers should not be wastefully thrown here and there, but there should be a special pile set apart for them; and by the use of a little plaster occasionally, you will have nothing unpleasant to the eye or smell, which is so often the case on many farms.

Ditches--Their Uses and Abuses.

No farm can be said to be in good condition without a judicious system of draining, either by open ditches or by tiles planted below the surface and beyond the reach of the flow. Open ditches very often damage land more than they benefit it. Particularly is this the case when the banks of the ditch have been cut down so low, in getting material for compost, that every rain washes in the cream of the adjacent land. Much damage has been done to land in this section by the water-furrow system, when the farmer intended and expected a benefit. The result in many cases has been the impoverishing of the land by washing and the constant filling up of ditches, rendering the clearing out an almost endless job, and very necessary after each heavy fall of rain. With your ditches deep enough, water-furrows are unnecessary—in fact, a nuisance. The banks of ditches should invariably be a little higher than the adjoining land, and covered with reeds, small bushes, or grass. This growth will prevent the ditch from washing away. We hold it is better that water should stand on land until ab-

sorbed or evaporated, than to wash off the cream of your soil and fill up your ditches. We have tried, successfully so far, planting large tiles on the banks of ditches to conduct the surplus rain water into them without any washing of the land.

Scuppernong Grapes.

The article of Mr. Louis Froelich, republished from the Report of the Department of Agriculture for '68, in our first (May) number, is well worth the careful study of every lover of the vine. Those intending to cultivate grapes for profit, cannot bestow too much attention on Mr. Froelich's article. He is an intelligent German from one of the wine districts of the Old World, and gives his views after ten years experience with this grape. Our own more limited observation fully confirms us in everything Mr. F. says. Its great hardiness—its freedom from disease and attacks of insects—its wonderful prolific qualities are known to everybody in Eastern North Carolina. The year 1867 was the most disastrous season to all garden and field products known to our oldest living people, yet that year the Scuppernong vines bore abundantly. A close observer and cultivator of this vine for twenty years tells us he never knew the blossoms of the Scuppernong to be killed by frost but once. A few days of genial weather brought out a second crop of blossoms, and a fine yield of grapes followed.

No foreign vines have ever done well in this section. For a long time it was supposed the Catawba and Isabella (the former claimed as a native of our State) would do well with us. At that time Mr. Longworth, of Cincinnati, had rendered the Catawba quite famous with his still and sparkling wines, and many thought we had a gold mine in this grape. Yet both the Catawba and Isabella, after producing well for a few seasons, rot so badly as to become worthless. The Scuppernong is, in our opinion, every thing claimed for it by Mr. F., and we predict for it a brilliant future.

WE INVITE essays from every portion of the State on the various subjects connected with the cultivation of the soil.

We particularly desire a paper from the Cape Fear, Roanoke, the southeastern counties, the midland, Piedmont and mountain sections of our State, on the cheapest and most expeditious plan of improving the soil in the several sections named. One of the grand steps to improvement in North Carolina is to increase the production of her diversified soil and climate. We want this done speedily and cheaply. The helpers in this cause will confer an obligation on the present and rising generations long to be remembered.

If Gen. Clingman's views, recently expressed, that the earthquakes of late years have thrown the Gulf Stream nearer to our coast, be correct, we are to have a permanent change of climate, more suitable for grain and grasses and less for cotton. To this we do not object. It will bring more salubriousness, better stock of all kinds, better and cheaper living, and more general worth to the country.

We repeat we particularly desire essays on the subject and from the sections named. Ye thinking, educated planters, draw your pens from their long confinement and let us hear from you.

GEESE-EGGS carried to the cellar as soon as taken from the nest, and turned over each day, will hatch well. Above stairs the temperature is uneven. Number the eggs, and let the first goose setting have those first laid.

Memorandum Book.

We give elsewhere a reason why all farmers should keep an account book. We now admonish all farmers to keep a memorandum book. By noting what should be done from time to time, especially the small items or jobs of work, you will find it to be a very useful guide.

Some will say this is nonsensical talk, for if a farmer is what he ought to be, he will understand the entire minutiæ of the farm; and others will say they have lived all their days without such a book, and consequently it is not necessary.

Have you not oftentimes determined in your mind to do many little things, when it would be more convenient than to break off from that which requires your immediate attention?

Have you not often omitted to do many small jobs from the fact that you forgot them? If you have never omitted any of these small things, then you need no such book. If you have, by keeping a record of what should be done, the first time it rains or the weather changes so as to stop you from your regular business, you will have a book to refer to, which will tell you there are tools to grind and handle, fences to repair, stalls to look after, &c.

Sow Peas in Your Corn.

Farmers, when you lay your corn by, sow three pecks or one bushel of peas per acre, broadcast.

Plow just deep enough to root up all the weeds and grass, and immediately after the plow follow with the hoe, destroying all the weeds and grass that may have been left; the result will be, in all your rich lands you will make a fine quantity of peas, and the lands will receive a rich covering of vines which will act as a vegetable fertilizer for the coming crop.

Many farmers plow their corn when they put it by, too deep. The secret of success in corn cultivation is, keep your lands drained and sufficiently rich; if so, then all that is required is, to plow your lands deep and well pulverize it before you plant.

Then plant at the distance you like. Our method of planting (for the most part) is all one way, or what is called drilled corn. The first time we plow the dirt from the corn to the depth of three inches. The second time we sow peas and lay by, as above directed.

If your lands are not drained or are too poor, the best preparation of seeding and cultivation will not pay.

To Mechanics.

We have a few questions to ask you, and we hope some member or members of your order will answer them.

Why is it that mechanics at the North grow rich, while at the South they are seldom able to comfortably settle themselves?

Shoemaker, why is it that you rent your house and wear bad shoes?

Blacksmith, why is it that you do not own a fee simple of your own?

Carpenter, why is it that your family lives in an ordinary house, or have to depend upon somebody for a shelter?

Masons, why is it that you are year by year laying stone, brick and mortar for other people, but are never able to lay the foundation for a habitation to shelter your own families from the winter's storms?

Painters, do you intend to spread paint all your lives on other people's houses, and never have one of your own to ornament with it?

Is it because you never take any thought for the morrow, or because your wages are too low?

We have received friendly criticisms through letters and messages from several parts of the State, urging objections to the name "Reconstructed" which we have adopted for our bantling.

From others we have received letters telling us we made a happy hit in selecting the name. The name is nothing, gentlemen. A "rose by any other name would smell as sweet." We will try and have good and instructive matter for our patrons once a month, and hope to see a general revival of interest throughout the State, in all matters touching the "Farm, the Garden, and the Household."

One word we will venture to indulge in, in regard to the name "Reconstructed." We have never seen the time when it was not appropriate to most of the farming done in North Carolina.

Our purpose, aim and hope is that we may appropriately throw it off in a few years.

Horticultural Department

J. B. CHESHIRE, D. D.....Editor.

In the impoverished state of our Southern country, it should be the effort of all persons to prevent any expenditure for foreign products that is not absolutely necessary. And it is a principle of rational economy that every country should produce within itself all the variety of articles which it consumes. If these truths were attended to, there would be an immense saving to this country in the article of tea, which can be raised in the Southern States as well as in China. It is estimated that there are consumed in the United States at least 30,000,000 pounds of tea annually. This consumption is mostly confined to the North and Northwestern States; but still a considerable amount is used at the South; enough to make it an object of attention to the farmers of our section. Every man may raise his own tea, by appropriating a small plot of ground to its culture in his garden or orchard. The plant grows very readily from the seed, and in two or three years will be large enough to yield its leaves for the manufacture of the pleasant beverage that fills "the cup which cheers, but not inebriates."

The Thea vividis is an evergreen shrub, growing to the height of twelve or fourteen feet, and is allied in its genus to the Camellias. The flowers are white and fragrant, and resemble a single Camellia. It is quite an ornamental plant, and thus unites in itself the beautiful and the useful. The seed are produced in a cup something like an acorn, and are about the size of the acorn of the water oak. These seed, planted in the fall in a shady larder, made light and rich with vegetable mould, will come up in the spring, and attain a height of eight or ten inches the first year. They should be transplanted the following spring to a shady part of the garden, to the north side of a fence, or in some position where they will be protected in the winter from the sun, and if the soil is well prepared by deep spading and by the application of woods earth or leaf mould, the shrubs will flourish with great vigor, and put forth a dense mass of foliage.

The Chinese prepare the tea by plucking off the young leaves in the spring, before they are half grown, or while they are in a very tender state, and then roasting them in an iron vessel or flat pan, which is kept very hot, while a workman stirs the leaves with his hands till they are sufficiently cured, when they are tossed out upon a mat, when he takes them up and rolls them in his palms to give them the proper curl, while another workman fans them continually, to cool

them as soon as possible to make them retain the curl. This operation is performed several times. They are then dyed, by adding to each pound of tea one teaspoonful of gypsum, one of turmessic, and three of Prussian blue. The leaves are then separated into different classes aud qualities, according to the finness of the leaves, or some slight variation in the process of curing; and this forms the different varieties of tea; nearly all the varieties being produced from the same plant.

But it is worthy of remark, that the Chinese never use this dyed tea themselves, but only sell it to "the outside barbarians," whose vitiated tastes demand the article thus manipulated. The tea which the Chinese drink is cured in the most simple way, which insures the leaves being so cured, as to keep them from moulding, preserving at the same time the delightful aroma which characterizes this plant. This shows us that we can have our tea without all the intricate preparation used in curing the tea we import, and the costly outlay of so much money in bringing it from the other side of the wide world.

In proof of this, Mrs. Patrick Edmondston, of Scotland Neck, Halifax county, in this State, has for many years raised hor own tea, simply curing it by roasting it over the fire, and drying it so that it keeps in a close metallic vessel without losing its aroma. Those who are connoisseurs in this article, have pronounced her tea as fine as any imported from "the flowery Empire."

When we consider the vast quantity of tea imported into this country, and that it all has to be paid for in China with specie, we see at once what a draw is made upon us for the precious metals, and we should set about to counteract this evil as far as possible. This we can do in a good degree, by raising our own tea for our own use; and in a few years, by extending the cultivation of the plant, the people of the South may become tea sellers, instead of tea buyers.

That the tea plant is easily cultivated in our soil and climate, is proven by the fact that the seed which fall from the plant germinate of themselves under the bushes and among the grass, where they fall, without any care or attention; and there are now hundreds of young plants growing in this way under the shrubs that I have growing in the churchyard in this place.

The expertment of growing and making tea is worth the trial to any one who is at all interested in horticulture, not only for the interest attaching to a plant of world-wide celebrity, but also for the saving we may make in our household economy.

An Item for Tree-Growers.

Chas. Downing says that he once witnessed a remarkable change produced on the body of a pear-tree by means of wrapping it in straw. The tree was a Brown Beurre, grafted about seven feet high from the ground, upon a stock which for years had not grown as rapidly as the graft, and presented a very decided bulge or swelling at the junction of the graft. This smaller portion was encased in straw about two inches thick, and at the end of two seasons it was found on removing the straw that the contracted, or heretofore smaller, stem had swollen to the full size of the graft above, presenting but a slight indication of the point of union between graft and stock. This is an item of interest, and many tree-growers who have trees with contracted stems, evidence of some natural want of affinity with the graft, may find in it a hint for practical use. We have ourselves practiced wrapping the stem of Morello cherries, when worked at a height of two or three feet with the free growing or sweet varieties, with moss, and thus kept them swelling regularly with the growth of the graft for years.—*The Horticulturist.*

Hardihood of Apple Trees.

The rapidly increasing settlement and cultivation of our northwestern territory, together with the increased interest and attention given to fruit-growing, is demanding a knowledge of all the items tending to constitute a hardy tree. The comparative hardihood of any one variety when root grafted or budded some four to six inches above the crown, has been freely discussed, and we believe has resulted in a pretty general impression that the budded tree is the best. One capable writer has tried to soften down the generally considered error of root grafting by distinguishing a line between grafting on *short* or *long* pieces of roots, claiming that the great trouble is owing to the few and uneven roots formed on the short pieces, and the disadvantage or difficulty of taking up the trees without cutting them badly.

As, in our knowledge, the roots, however started, form in ratio to the growth of the top, we do not see how a graft inserted on a piece of root one foot or more in length gives any more hardihood to the tree than when the graft is put upon a root of only four inches in length. It has ever been our impression that the seat of vitality—the point of hardihood, if you will, because the more of vitality the more of endurance—lies in what is termed the crown, that point from whence, in a seedling, the root shoots one way and the top another. In any plant grown from a cutting or a root graft, this natural point is lost; nature is forgotten, and art has assumed control; a more ready and rapid propagation is obtained, but at a measurable loss of natural vitality.

In the study of our cultivated varieties we have learned that some have more of hardihood to endure climatic change than others, no matter how propagated; and as a rule, it is found that the nearer the cultivated sort is allied to a natural or crab, the hardier it is. In vegetable life, as in animal life, all have not alike the same vitality and capability of endurance; and when we work any one of our cultivated sorts on any number of seedlings, the results are not alike, as every practical observer knows. Greater uniformity is maintained when a variety is root grafted than when budded on an indiscriminate lot of seedlings, an item which we view as sustaining our idea of the vital point and the influence obtained thereby.

The recommendation of the Wisconsin State Horticultural Society to grow apple stocks from the seed of Siberian Crabs, because of their hardihood, is a good one, but in order to follow our own views, and enable the grower to obtain the greatest hardihood for his permanent trees, great care must be taken, first, to see that the tree from which his seed are taken be perfectly healthy. Second, to select his seeds, using only the largest and plumpest. Third, when his seedlings have grown one season, and stood over one winter, to go among them, and root out all that show any sign of feebleness. These three conditions performed, there is good reason to suppose the operator has material on which to build permanent growth, which he may do by budding or grafting at any point not less than four inches above the natural crown of the seedling.

Nurserymen will of course object to this mode of procedure, as involving too much care and labor corresponding with the present price of trees. But if there is really anything in it, according to our belief, then it would be better for the planter to pay four or five times the present price of trees, each one of which could be depended upon, than to receive the trees grown upon the present cheap and reckless manner as a gift.

As we have said, the northwestern portion of our territory is alive to this subject, and demanding the attention and knowledge thereto, insomuch that we believe a stock of apple, pear, and cherry trees, grown upon principles tending to give them increased hardihood, would as soon as grown find ready sale at remunerating prices. The people are becoming rapidly educated in fruit-growing. Instead of the orchard being an appendage to the main objects of the farm, to be planted and then neglected, it is yearly coming more and more to be the leading item, one that can not be overlooked even by the owners of the largest of stock or grain farms; and with this knowledge of the value of fruit-growing comes a corresponding knowledge of the difference in value of trees and vines, and a willingness to pay therefor.—*The Horticulturist.*

Bedding and Border Plants.

It is quite time now to be preparing for summer flowers. We take it for granted that those who can, will have them, and in some degree they are within the reach of every one. If it is not possible for all to have highly ornamented and extensive grounds, certainly enough time, space and labor may be spared to decorate a small plot.

That class of flowers usually called *bedding* and *border* plants are most convenient and effective, and when combined with some of the annuals, which are grown from seed in the open ground, are made to serve any purposes of decoration, from the simplest to the most elaborate, comprising, as they do, all colors, forms and sizes.

Border plants should be mainly of low growth, interspersed with occasional taller and more striking sorts. For instance, a border matted with Verbenas and Portulaca should be relieved at intervals by some of the foliage plants (varieties of Coleus and Achyranthus), Phlox Drummondii, Geraniums, Petunias, Fuchsias, Double Balsams, and for later bloom, Asters, Marigolds and Chrysanthemums, Or if it is desired to do without the ground work, a showy border may be made of the above named taller plants properly grouped, with the addition of a variety of Roses. These last do not come under the head of border plants, but hardly any one expects to do without Roses in a collection of flowers. A border in this style may be much improved by an occasional runner trained upon a slight support. A wide border is rendered more complete by a low edging of Dwarf Box, or Alternanthera, which is a dwarf foliage plant of much value for this purpose.

In planting flower beds, no fixed rules can be laid down, as so much depends upon size, form and locality, and after these are given, so much upon individual taste. Circular or oval beds are generally arranged so that the lowest growing plants shall be near the edges, and increase in height toward the centre. This gives the impression of a mound without its disadvantages, and allows each flower its due prominence. The following list, in the order in which they are named, or nearly so, are each taller than the preceding, and will admit of grouping to great advantage: Pansy, Ice Plant, Verbena, Sweet Alyssum, Candytuft, Petunia, Heliotrope, Fuchsia, Balsam, Geranium (in endless variety), Pelargonium (do.), Canterbury Bell, Carnation, Salvia Splendens, Deutzia Gracilis, Lantana, Achyranthus, Coleus, Tea Roses. The centre to consist of a large Rose, an Evergreen, or a delicate running Vine, trained as a pillar. In this and any other forms for flower beds that may be adopted, due regard must be had to color and habits of growth of the plants. But no rules can be definitely established for the grouping of colors, it being so entirely a matter of taste.

Towards the close of Summer, nearly all the flowers heretofore mentioned will have ceased to bloom, and unless provision is made against it now, the flower garden will then begin to assume a desolate appearance. There is, however, a large class of plants called Fall-blooming flowers, which will be ready to supply the placss of those that are fading away. In this list the Fall-blooming Roses must take a prominent place. Richly colored Dahlias, Gladioli, Tuberoses, with their graceful flower stalk and delicate perfume, the many shades and styles of Chrysanthemums, Asters, Marigolds and Amaranths will almost compensate for the loss of the summer bloom. Fall flowers are generally too little appreciated. The Gladiolus, especially, is but little known and cultivated, while it is one of the most beautiful and highly ornamental flowers for bed or border.

Finally, do not neglect *climbing* and *trailing* plants. Wherever there is an unsightly fence or wall, there exists the opportunity of rendering that the most beautiful part of the garden. Any of the family of Honeysuckles, the Chinese Wistaria, many kinds of running Roses, the Clematis, the Virginia Creeper or the Jasmines will soon conceal all such ugly places, by their masses of foliage and bloom. But their use is not advocated only to cover defects. They are sufficiently desirable to be especially provided for, and hardly any plan for a flower garden can be complete without a handsome pillar or trellis.—*Southern Planter and Farmer.*

[From the Horticulturist.]

The Peach.

It must be honestly confessed that, as scientific horticulturists, the majority of us know very little about the peach.

Stop! I may be too fast in this proposition; well, let it be modified by saying that very little definite information is to be met with in our periodicals respecting the peach.

Since A. J. Downing wrote up the history and practice of peach-growing as an orchard crop, few satisfactory experiments have come within our observation calculated to throw a satisfactory light on the want of success which has, in the majority of cases, attended the extensive culture of this fruit.

Too much like many other ventures, "peach-raising has had its day."

This idea might be accepted without comment, but for the fact that under certain circumstances, and in various sections of the country, at intervals, fair crops of a fair quality are produced. But what is more important, individual trees, in many sections, are found to produce abundant crops of the largest and finest fruit, without, it would seem, any special care or attention. Such trees are produced from chance pits, either deposited as an experiment in private yards or gardens, or spring up spontaneously from the pits cast away by chance. In either case the result is of equal importance in demonstrating that good peaches and an abundant crop may be obtained from such individual trees, leading us to the inquiry, why this result in these exceptionable cases?

That there are hundreds of such instances of chance seedlings producing luscious fruit, and an abundance of it, it is presumed no one will question who has been a close observer or frequent attendant at fruit exhibitions.

Nothing connected with our fruit culture is more striking than the rapid decline of the peach crop in many sections of the Middle States. It can scarcely be credited that, in twenty years, districts of New Jersey have fallen off from thousands of bushels of choice fruit to a few bushels of like quality; the remainder being spotted, second rate, or almost worthless fruit. Yet who can doubt but that negligent cultivation and a want of due attention to the requirements of this unacclimated tree have been the chief causes of the deterioration?

Changes in the atmospheric conditions of our climate have, without doubt, had much to do with the recent failure of the peach, as all our orchard fruits appear to be on the decline during the past quarter of a century. Atmospheric changes can not, however, account for the entire failure; several other matters bear a part of the blame. Various reports of reliable and interested growers combine to place considerable weight on the nature of the soil, and many of them express their belief in the absence in many soils, otherwise apparently suitable, of some "unknown ingredient" which the peach demands; this is but negative information. Other more certain defects are readily detected, such, for example, as the general exhaustion of the thin, sandy soil chiefly selected for peach orchards; the exhaustion of the vigorous constitution of the trees by injudicious selection of diseased or debilitated pits; budding by selecting cions from one-year-old immature trees, in which the wood-producing cells only have been developed; inattention to the selection of a proper site, in which the tree will be exposed during the early spring and late fall, so as to avoid the premature starting of the sap before the severe frosts have disappeared, thereby exposing the expanding buds, and in autumn or early winter shelter preventing the full development and maturation of the wood by the partial ripening of the foliage—these are some of the causes which, in my mind, have led to the failure of the peach.

To what extent the skillful and intelligent cultivator could avoid the evils arising from the causes above enumerated, we can not accurately determine.

In addition to the presumed evils, the remaining well-defined causes of deterioration are, the attacks of the borer and other pests; the winter killing of the buds in usually severe seasons, and the blighting of the blossoms from the same cause; the injury to the foliage from parasitic fungi, induced by want of vigorous development, and other contingences.

The condition of a tree can be determined on inspection by a skillful cultiva-

tor. The presence of a multitude of twiggy shoots crowding the interior is an evidence of negligence in pruning; the absence of a healthy green hue in the foliage argues imperfect development of the coloring matter—the best evidence of healthy leaves; this you may call the "yellows."

The presence of the "curl" or blister on the leaves, showing the attack of a well-known form of fungus which has secured a footing in consequence of the unhealthy state of the tissue, but which will temporarily yield to a vigorous growth at a more advanced period of the season, and the presence of other forms of parasitic pests, are certain evidences of weakened vitality. Once for all it may be safely affirmed, that as the multitude of animalculæ attack the fallen trunk and limbs, and reduce the organs of which they are composed to mere decaying matter, so these organized vegetable growths of the lowest grades attack the still struggling plant, and insinuating their peculiar roots or *mycelia* into the cells and passages, draw therefrom the juices destined for the support of its foliage and appropriate them to their growth and nutrition.—Without these wonderful agents—the scavengers of the vegetable world—we should fail to note the presence of imperfect vitality, and should prize our invalid trees as if they were perfect models of health, to be mortified and disappointed at the unprofitable result.

The practical eye, however, detects the various forms of minute parasitic fungi on the leaves or bark or wood, and thus is forewarned of the approach of insidious decay. Such, however, is the nature of these forms of the vegetable kingdom that they continue for months and years to increase and spread over and throughout the congeries of cells and vessels, until the tree, with its multitude of leaves and shoots, falls a prey to their insidious attack. So much, at least, has been learned of the philosophy of these minute but innumerable attendants on debilitated growth. How much remains to be learned, we dare not conjecture.

The "curl," "mildew," or any other form of such parasites is but the evidence that all is not right within the tree. The sooner we set ourselves to stimulate and restore a healthy growth, the sooner these will drop their hold upon its vitals.

"FUNGUS."

Peach Borers and Yellows.

It may be interesting, as well as useful, to some of the *Horticulturist* readers to know of a safe and effectual method by which the fatal attacks of the peach borer may be prevented. Having tried all the plans proposed for the last five years—merely as an experiment upon neglected trees—I have found them all deficient in one thing, *i. e.*, in preventing a renewal of attack. Nine years' experience fully proves to me that the waste water of salt works, called "mother liquor," or "bitter water," is a sure preventive. I will not aver that it will kill the worm when once in the tree, as my experience is not conclusive on that point, but I do assert that it has killed them by thousands when partly in the tree and not entirely shielded by the bark. We apply it any time during the summer, but when possible, in June and last of August, putting about one pint of the liquid around the base of each tree. At the same time we wash the body and main limbs of the tree with the same liquid, which removes scales of dead bark and kills the eggs of insects.

My observations in the treatment of trees to this liquor leads me to declare it to be the most powerful agent in preventing the dreaded disease known as "yellows" that has yet been discovered. Trees in a rapidly declining state from the effects of this disease, being treated to this liquor, took on a new life as it were, casting their yellow leaves and throwing out an immense healthy foliage. JOHN M. JENKINS in *The Horticulturist.*

APPLES IN NORTH CAROLINA.—J. Lindley & Son, of New Garden, North Carolina, write they have two apples of great value, viz., "Golden Wilding," a roundish oblate, yellow, very good; tree, strong, upright, and thrifty, and a great bearer.

"Royal Limbertwig, large, roundish oblate, dull red, covering mostly a greenish yellow ground; great keeper."—*The Horticulturist.*

Seed-Growing.

In the Agricultural Department of the March number, there appeared a communication from Mr. Theo. S. Garnett, on the subject of home grown potatoes for seed. Mr. G's position is undoubtedly correct, viz: that potatoes *may* be grown year after year in Virginia without deterioration. The common idea, that this and other seeds cannot be grown here, arises only from the fact that they never have been; the difficulty heretofore has been, not that seed could not be raised, but that our people either did not know how, or were unwilling to exercise the care and management necessary to grow them. So far from their being anything in our soil and climate to hinder the production of good and constantly improving seeds, the reverse is true with regard to many of the leading vegetables and fruits. Take, for instance, Flat Dutch Cabbage; an experience of many years in this business enables us to assert that the seed of this cabbage grown around Richmond surpasses any that we have bought from other sections. But to prevent deterioration, it is important, first, to select only the best specimens of roots or plants, from which to grow seed, and secondly to cultivate highly and carefully.

Indeed, seed-growing is a distinct business—one that requires skill, experience, and great caution to conduct successfully—and because of this, it has been neglected in the South, our farmers preferring to purchase from abroad, rather than take the pains required to produce at home. We are glad to know that some of our gardeners are entering upon this field, and hope that many others will follow their example. Judiciously conducted, the profits are large, but prudence must be exercised, or the losses will be ruinous; for many seeds may be grown here without detriment, which, owing to the condition of climate and season, will give too light a crop to be profitable. Early York Cabbage is one of these. In this country it will not yield above fifty per cent. as much per acre as it will in Englaud; consequently, we cannot compete with the foreign seed. So with Beet and Radish. The Frenchman can grow and sell these at about half what it costs to produce them here. But all the late Cabbages, Parsnips, Cucumbers, Squashes, Melons, Beans, Peas, Potatoes, &c., can be reproduced *ad infinitum*, with constant improvement in quality and earliness, if care is taken to save only the "first fruits," and the best of these, to continue the stock. Let us hope that in a few years, instead of being a drain, seeds may become a source of revenue to our State. The climate and soil are propitious, and it rests with the people to take advantage of them.—*Southern Planter and Farmer.*

Every kind of fruit is increased in size and improved in quality by attendance on early thinning. If done early, the one pear or peach left where two were, will often become as large as both would, and be vastly better.—*The Horticulturist.*

Cure for Sheep-killing Dogs.—"L. B.," Washington Hollow, writes: "I have a valuable dog, and more valuable sheep, for which the dog has an illicit liking. Is there any cure short of bullet?"—In one instance, the following remedy was effectual. The culprit was muzzled and strapped by the neck to the necks of two stout wethers. The sheep took fright at their unusual companion, and dragged him around the pasture in all directions. When tired out, the sheep were released, and the dog sneaked home, thoroughly cured of his appetite for live mutton, and he was never known to chase sheep afterward. If this remedy fails, try the bullet.—*Amer. Agriculturalist.*

The common practice of using pads or sheep-skin under a horse's collar is objectionable, especially in warm weather, because it accumulates heat and makes the breast tender. A better way is to take a piece of thick and smooth leather, cut it out just the size of the collar, or a little wider, and let it lie flat on the neck and shoulders. It will lie smooth, while the collar itself moves about, and chafing will thus be prevented. It is also well to wash the breast of a working horse every night with clean water.—*Hearth and Home.*

[For the RECONSTRUCTED FARMER]

MESSRS. EDITORS.—It would afford me great pleasure to furnish you with a detailed report of the growth, properties, adaptability to soil, &c., of the "Sorghum Canes," but I have never raised the canes or studied their characteristics sufficient to do the subject justice, and could only condense what I have gathered from publications on the subject, something you are far more capable of doing than myself. I must beg you accept, as a suitable response to your kind and flattering letter, the following interesting report of Prof. J. Lawrence Smith, of Louisville, Kentucky, who was formerly Professor of Chemistry at the University of Virginia. This report is undoubtedly the most important document ever published on this subject, and it deserves the careful consideration of the rising generation.

Yours, very respectfully,

WM. F. BEASLEY.

GREENSBORO', N. C., May 19, 1869.

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[From the Courier-Journal.]

TESTED.—THE SACCHARINE STRENGTH OF SORGHUM SUGAR.—It will be seen from the report made by Prof. J. Lawrence Smith, upon his analysis of sorghum sugar, as compared with New Orleans and West India sugars, that sorghnm sugar takes rank as possessing more crystalizable or pure cane sugar than three-fourths of the sugars examined by him. We need not tell our readers that such an analysis made by Prof. J. Lawrence Smith, whose reputation as a practical chemist is not confined to his native land, must forever settle the question of the saccharine strength of sorghum sugar. It can but be gratifying to every agriculturalist that such a result has been practically attained by the Louisville Sorgo Company, in Jefferson county, and that there can no longer be a doubt of the complete success of the manufacture of a valuable class of sugars from the sorgo plant. The following is the report of Professor Smith:

LOUISVILLE, KY., April 27, 1869.

EXAMINATION OF SORGHUM SUGAR (MADE BY PROF. J. LAWRENCE SMITH), FROM THE MILLS OF MESSRS. LEWIS, WILHELM & JOHNSON.

I have examined the specimens of sugar placed in my hands, said to have been produced from the sorghum. It is an exceedingly light colored brown sugar, and would be valued as a dry sugar of that class. The crystals are good and of a handsome appearance, having a slight agreeable odor, and being dryer than most West India and New Orleans sugars. It is more open and more bulky weight for weight. On the whole it would be valued as an excellent sugar, and certainly surprised me very much in its appearance, although I was familiar with experiments made on sorghum juice.

I submitted this sugar, without drying, to a careful examination by polarized light (this being the most approved method of examination) to ascertain the amount of crystalizable sugar or true cane sugar present in the specimen. Contrasting it with several specimens of New Orleans sugar, coming from the hogshead, it gave as follows:

From sorghum sugar 89 per cent.

From New Orleans specimen, very white, 90 per cent.

From N. O. specimen, No. 2, 85 per ct.

From N. O. specimen, No. 3, 80 per ct.

From N. O. specimen, No. 4, 72 per ct.

In this comparison, we speak of cane or crystalizable sugar, for the amount present in any sugar is the true type of its saccharine strength. It is not out of place to remark that the tastes of a great number of people are in the habit of ranking the brown sugar sweeter than the white sugar, yet this is far from the case. This singular contradiction arises from the pleasant taste afforded by the small amount of molasses remaining in the sugar, developing the pure sweetness of pure sugar. I believe all the analyses and queries propounded to me have been answered in this communication, as agricultural and commercial questions are responded to in another report.

LAWRENCE SMITH,
Practical Chemist.

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THE RECONSTRUCTED FARMER

A

Monthly Magazine,

DEVOTED TO

THE FARM, THE GARDEN,

AND

THE HOUSEHOLD.

PUBLISHED AT TARBORO, N. C.

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN,
JOHN S. DANCY, - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

VOL. 1.] TARBORO', N. C., JULY, 1869. [No. 3.

On the Principles of Stock Breeding.

A Prize Essay, by Dr. R. J. Breckinridge, of Fayette county, Ky.

The particular stock to which the following remarks more immediately relate, is the *Shorthorns*, commonly called Durham cattle. But the great principles laid down apply to all kinds of domestic quadrupeds. The Shorthorns are selected because they are at the head of all races of cattle; and therefore, in a country the basis of whose husbandry is grass, they are at the head of the live-stock interest. Anything which promotes their intelligent culture, must promote in the highest degree, the agricultural interest of the State. The single point herein discussed is *breeding*—that being the only one embraced in this particular theme, as assigned by the State Agricultural Society. And the object aimed at is, to state, briefly and clearly, the great principles which breeders must understand and adopt, if they would breed with certainty, and with profit.

LAWS OF NATURE.

There are two natural laws which lie at the foundation of this whole subject, both of which we must steadily regard. The first is, that *like produces like*. What we expect and desire in offspring, we must find in the parents. This stability and uniformity of nature is the very foundation of the whole order of the universe. We are not entitled to expect that it will be departed from for our advantage, nor need we have any fear that we may not trust implicitly to its force. What we mean by *pure blood* or *high bred*, is, that the animals thus designated belong to a family that carries very far, and that has carried very long, the power to produce other animals having the particular qualities we prize and seek. This great law of like after like is subject, like every other law of nature, to be weakened, or to be increased in its power, and is liable to operate to the great injury, or the great advantage of man. But its existence, and its fundamental importance must be recognized in every step the breeder takes.

The second of the two great natural laws, alluded to above, may be thus stated: *Culture is capable of modifying the great law of like after like, both for good and for evil, to the utmost extent compatible with the enduring power of the law itself.* It is impossible to set limits to the injury, or to the improvement that everything which exists is capable of, while yet remaining essentially the same. While the first law teaches us that we can improve everything that exists, these two laws give to the breeder all the control that is possible, or desirable, over the subject. Absolute unity, certainty, and steadfastness is the thing, and yet almost boundless variety in the modes of its manifestation—these

are the two grand truths which the breeder must operate with, in all his endeavors to perpetuate or to improve any race of animals.

FUNDAMENTAL RESULTS OF THESE LAWS.

1. In the first place, it is utterly impossible for us to perpetuate *artificial* peculiarities of any kind whatever. A horse, nicked or foxed, never begets a nicked or foxed colt.

2. In the second place, *natural* peculiarities—congenital, as they are called—when they are uniform in the particular race, will be propagated with like uniformity; thus, no Shorthorn is of any color but white or red, or a mixture of both.

3. In the third place, these natural peculiarities, even when they are personal to the particular animal, are, to a certain extent, propagated in its offspring; thus, a bull born without a tail, or with a very coarse head, may be expected to have some calves with similar defects, and following up, we might at last establish a family thus accidentally originated by nature.

4. In the fourth place, we may, by persevering neglect or ignorance, or design, greatly seduce nature to originate these accidental varieties, and torture her into the production of deformed, or barren, or monstrous animals.

5. In the fifth place, we may, by docile, assiduous, and kind waiting on nature, so learn her ways, and so win her smile, that our wise and experienced endeavors to help her efforts, will be followed by abundant rewards in the increased beauty, excellence, and value of all we rear.

6. In the sixth place, our wisdom is, therefore, to avoid carefully all those peculiarities which are merely *personal* to particular animals, and to select animals for their general perfection in the peculiarities common to the race; for in the former case, we are liable to an excessive special development, while, in the latter case, we may expect general excellence and improvement, which is what we want.

GENERAL PRINCIPLES FOUNDED ON THESE LAWS AND RESULTS.

1. A vast amount of injury is done to domestic animals of all sorts, by crossing various races of each kind upon one another. No man can guess of what race, or of what mixture of races, the common cattle, horses, sheep, or hogs of the country originally came; but every man can see how few capital animals are to be found amongst any of them. This promiscuous method of breeding one variety upon another subverts the first law, and resists the uniform endeavor of nature, as applied to the whole subject of breeding. We cannot even keep up a race of half-breeds by breeding half-breeds to each other. How, then, can a race, with a multitude of different crosses in it, possibly be either uniform or valuable? To adhere tenaciously to an unmixed blood, is the very first requisite in all breeding that aims to preserve the excellence we have already secured, or to increase it in any race of animals.

2. The question of *pure blood*, as applied to every race of animals, has already been explained as a matter of principle. As a matter of fact, in the case of each particular animal, while we are left, in a great degree, to depend on the testimony of owners and traders for extended pedigrees, yet there are natural marks well known to experienced breeders, and clearly laid down in all books which treat of the different races of animals, which render gross imposition impossible on those who understand their business. A thorough-bred Shorthorn is as easily distinguished from other races of cattle as a Saxon sheep is from a Cotswold, or a race-horse from a cart-horse; and unless we will put ourselves to the trouble of being qualified to do this, we must be content to trust our ignorance to chance. With regard to herd books, we are liable to form very erroneous opinions. Those books are of great value, precisely as any other means of advertising is, and also very much as a record office of land titles is. But it is very idle to suppose that all advertisements are strictly true, or that all lands with a perfect title are rich lands. Many herd-book pedigrees are, on their face,

condemnatory of the animals advertised, and not a few are incorrect. That breeders do not guard against such evils, or that they are not sufficiently informed to do so, are amongst the reasons why they are so often disappointed in the stock they breed.

3. It is one evil result of the various errors already alluded to, that any countenance should be given to attempts to elevate high grade cattle to something like an equality with those of pure blood. Shorthorns are a distinct and very ancient variety of cattle—for our purpose in Kentucky, and in the West generally, incomparably the best race of cattle. High grades are, no doubt, a very great improvement on the common cattle; but to dignify with the name of full-blooded, and to allow them to be considered as a near approach to the pure-blooded, is a serious error, which can work nothing but injury to the stock of the country, and which can impose on none but ignorant breeders. If the Shorthorns were a race made by crossing several races—which some have ignorantly pretended—even then it would be useless for us to work the race over again by new crosses. But seeing it is a distinct, peculiar and very perfect race, created, perhaps at first, and very anciently, by natural congenital peculiarities in certain animals, and afterwards most carefully bred and improved by culture through many centuries, and now widely diffused and multiplied in all the finest portions of the earth, it is mere wantonness for those who are interested in this noble race to connive at practices so injurious to its reputation and value. If full-blooded means anything else than thorough-bred, then it means grade, and ought to be so called; but if it means to place the grade on a level with the pure, then it is mere folly or imposture.

4. Thus separating the pure from the grade, produced by itself, and from all mixture with other races, no matter how excellent, we are restricted in breeding to animals of the one race, and this universally in all breeding that aims at permanent improvement. Pure breeding is therefore, necessarily in-and-in-breeding, to a certain extent. How far that principle should go, and by what means we can best avoid its supposed evil results are questions upon which great difference of opinion exists. In this country there is a general prejudice against in-and-in-breeding; and breeders of Shorthorns generally have accustomed themselves to keep their bulls only for a few years, and to seek breeding animals as remotely related to their own herds as they could obtain. It is this same feeling which has created and sustained such constant and excessive importations of Shorthorns from England; although in the judgment of those most qualified to judge, and who have had the best opportunities of forming an opinion, we have in Kentucky larger herds and better animals than exist in England. The most certain and the most obvious effect of this method of breeding is to deprive any particular herd of any distinct character peculiar to itself. The general improvement of all might possibly be promoted in this manner, if all breeders were skilful and experienced. But the special improvement of any to a very high degree, is nearly impossible, under such a system, by which every breeder guarantees, in a manner, the skill and knowledge of all the rest, and at the same time deprives himself habitually of advantages obtained by his own skill or good fortune, at the very moment those advantages are most important.

5. As a matter of fact, experience has clearly proved, that while in-and-in-breeding, followed ignorantly or indefinitely, may produce much injury, at the same time in-and-in-breeding has been so followed as to produce not only the very finest animals, but the very finest herds of the race. As a matter of principle, as has been already intimated, in-and-in-breeding is but another name for pure breeding; for all pure breeding is confining ourselves to one race, while in-and-in-breeding is but confining ourselves to a few, or to a single family of that race. If we will be guided by nature, her proceedings are invariable as to the method by which she keeps races distinct, and carries them to perfection. For all animals that pair, pair out of the same litter from generation to generation; and amongst all gregarious animals, not only does the same

herd continue itself, but it happens necessarily and continually, that the very closest in-and-in-breeding, both up and down, and collateral, is the very rule of her work. In both instances, the results she produces is a uniformity and a perfection in every species, up to the highest points permitted by the circumstances of each. The general truth undoubtedly is, that by skilful in-and-in-breeding, we intensify the prevailing blood, whatever that is; we get rid of all subordinate mixtures and tendencies; we give increased stability and uniformity to the peculiar characteristics of the race; and we establish, in the firmest manner possible, all the qualities of the race, whatever they may be. It cannot be too distinctly understood that this question depends essentially upon another already spoken of. If the Shorthorns be a distinct and a pure race, in-and-in-breeding is a certain way to perfect it; but if it be a made race, in-and-in-breeding is a certain way to break up as mixtures, and to bring out the prevailing races which compose it. As there can be no doubt that it is a pure race, the popular prejudice against in-and-in-breeding, as applied to it, is unfounded and injurious.

6. There is some difference of opinion as to the age at which animals should be put to breeding. The prevailing opinion among the best breeders is, that heifers should bring their first calf at about three years of age—some respect being had to the season of the year at which the calf should come; and that bulls may be allowed to serve a few cows without injury to them, at fifteen to eighteen months old. The average time of gestation for a cow is two hundred and eighteen days. Nearly all heifers will bring their first calf at two years of age, or even younger, if permitted, the effect of which is apt to be to retard the complete development of the cow, if not to injure her permanently in size and appearance. Under all circumstances, this race of cattle appears to be liable to occasional barrenness in both sexes; and to compensate for it, by occasional excessive fecundity, twins being far more common than barren animals—both of which facts, if not peculiar to this race, are far more common than in any other. There is no reason to believe that the offspring, either of the cow or the bull, depends upon the age of either parent for its excellence, except so far as the health of the parent, and its adequate vigor, may be considered as influenced by its time of life. As a race, the Shorthorns are vigorous, healthful, and long-lived. Among them, as amongst all creatures that exist, there is reason to believe that hereditary qualities, that are personal, descend most surely across the sexes, to-wit: from the male parent to the female issue, and *vice versa*. A remarkable fact, of the very highest importance, of which all ages and conditions of men have had a vague conviction, which nothing but experience can establish, and which well deserves a more serious examination than it has received.

It would add many millions to the wealth of Kentucky, if all her cattle could be supplanted by this race of Shorthorns, or even by high grades of them. Even the permanent establishment of numerous herds of pure blood and high excellence in her unequaled grass region would open a mine of wealth to the State. The culture of them, moreover, besides being amongst the most remunerative branches of rural economy, is one of the most rational and beautiful parts of the farm life of landholders. The great attention, therefore, which is paid to them by all our Agricultural Societies, is one of their most beneficial acts; and this little attempt to promote their objects will be accepted, at least as a token of the satisfaction and good wishes of an old breeder.

To Prevent Hens Eating Eggs.—A correspondent of the *Prairie Farmer* says he has accomplished this by keeping a setting hen upon the nest, and removing the eggs every night. His hens, that got so bad that they would "go for" a nest in a flock as soon as they heard a cackle, were broken of the habit entirely by this means.

A writer in the *Rural New Yorker* dissents from the theory that many windows are desirable in barns. He thinks the money often expended in making them could be much more judiciously expended.

[From the Prairie Farmer.]

Among the Cotton Fields.

It having been our happy privilege to accompany the Illinois Press Association in the late excursion from Chicago to Mobile by way of Cairo, and over the Ill. Central and Mobile and Ohio railroads, we propose to give our readers the benefit of some of the observations we made, and the information we gained from settlers in relation to the agricultural capabilities, and the present agricultural status of the country through which we passed. As our readers are apprised from week to week of the crop prospects of the Northwest, we shall limit our remarks in this article to the region situated south of the Ohio river and along the line of the Mobile and Ohio railroad; and shall reserve what we have to say of the excursion as a pleasure trip, for another article.

CHARACTER OF THE COUNTRY.

Throughout the whole regions from the Ohio river to the Gulf of Mexico, the surface of the country presents a somewhat similar character. The soil is largely a clayey loam, strongly inclined to clay in the lower portions, and to sand in the higher. Nearly all of it is undulating, affording a much better natural drainage than is found on our prairies. There are a few prairies; but for the most part, there is a fine growth of timber. In the Northern portion the cotton-wood, black-jack, and sweet-gum abound; through Tennessee the chestnut is plentiful, and in the lower lands all along the route, there is an abundance of cypress and ash. Further south, particularly on the sandy lands of Missisippi, there are many yellow pines, interspersed with holly, and from the Alabama line southward, the giant live-oak and gorgeous magnolia give beauty to the landscape.

WHAT CROPS ARE RAISED.

Through the small portion of Kentucky that we passed, there were many small, but excellent fields of winter wheat, considerable land ready for corn, while there were numerous beds of tobacco plants, showing that the cultivation of the Indian weed was not to be neglected. In Tennessee there was considerable wheat which also looked promising, but by far the greater breadth of land in cultivation was in corn and cotton; about a third or a fourth corn, and the remainder cotton. We also saw many orchards in fine condition for fruiting, and many new ones had been recently planted out. In Mississippi and Alabama the grain fields disappeared, and in their place we found corn fields, most of which had been once plowed, while the great proportion of the plantations was given to cotton. This last crop is regarded as promising in most districts, though the season here is some twenty days later than usual.

HOW THE LAND IS TILLED.

The methods of tilling the soil in this portion of the South, seem to be of the most primitive kind. With rare exceptions, the only plowing is done with a single horse or mule, to which is attached a rough-made plow. A prominent implement dealer and seedsman in Mobile, informed us that most of the plows sold by him were of a class that could be offered for five dollars or under. He had sold but three or four corn planters during the season, and the great demand was for farm implements of the cheapest kind—such as would receive little injury from exposure, and the destruction of which would occasion but little loss. In many places we saw corn planted on fields that were in cotton last year, where the only preparation of the ground was to turn a shallow furrow outward from one side of the cotton ridge, and on this the corn was planted. On uneven ground or that containing stumps, the corn was mostly in drills, but on smooth fields some was planted in hills, to admit of its being worked both ways with a plow, as with us.

The cotton fields were better prepared than this. The usual plan is to turn up two or more furrows on each side of the row, and the whole is finally made to resemble a ridge for sweet potatoes. We occasionally saw land prepared in this way for corn in places that were wet or subject to overflow. With the exception of the surplus cotton seed that was hauled on the land, we saw but very few

attempts to make the fields more productive by the use of fertilizing of any kind. We were pleased to learn, however, that a subsoil attachment to a one-horse plow, the invention of Col. Murphey, of Alabama, was being brought into use in some districts, and that Peruvian guano, and South Carolina phosphates, were being experimented with to a considerable extent. We also conversed with several intelligent planters, who expressed the opinion that the hope of Southern agriculture lay in the introduction of fertilizers, so that the yield of cotton to the acre could be doubled, and the labor required no greater than at present.

NEW CROPS IN THE SOUTH.

There seemed to be a general desire on the part of the planters with whom we conversed, to aid in the introduction of new crops. We learn that a greater number of acres have been put in rice this season than formerly, and that its culture has been introduced into sections where it had not previously been grown. Many enquiries were made in relation to the cultivation of broom corn, and there seemed to be a disposition to test the adaptability of the Southern soil and climate to this remunerative crop. With cheap railroad facilities, without doubt, the cultivation of fruits and vegetables for the Northern market could be made very profitable. Heretofore the culture of cotton has engaged almost the entire attention of the planter, if we except the raising of sufficient corn to feed the laborers on the plantations, or possibly to fat a portion of the pork that was needed. Indeed, in many instances, these articles were obtained from the North, and the whole attention was given to the one great staple. Many now seem desirous to cultivate sufficient of the food-producing crops for home consumption, and to grow cotton as a market crop.

HOGS AND OTHER ANIMALS.

The jolly porker and her numerous progeny, that used to be so plentiful on the sunny hillsides and shady groves of the South, are now only seen in favored locations, and then only in very small numbers. Men of every shade of political opinion, and who hold the most extreme views in politics, all united in the opinion that reconstruction had gone hard with the pig. Many that start out in the morning, in the bloom of health and vigor of youth, fail to return to their wonted haunts at nightfall; while others, that "lie down to pleasant dreams," pass before morning into the sleep that knows no waking. Even the strong arm of martial power seems powerless to protect them; for we heard strange stories of their mysterious disappearance in places where both the Tennessee militia and the regular army soldiers had been stationed.

In relation to other kinds of stock, the case is not so bad. There are less horses and mules in the country than before the war; but as the number of field hands is much less than formerly, their relative proportion is, perhaps, fully equal to what it was, so that no part of the country is very deficient in animals for farm work.

AREA IN CULTIVATION.

One is almost pained in passing through this fertile, sunny region for which God has done so much, to notice how little of it is improved by man. In many sections along the line of the railroad it is rare to find two consecutive miles of cleared land; the rest is covered by primeval forests, the luxuriance of whose growth clearly points to the capabilities of the soil to produce abundantly almost every crop that may be planted in it. In the vicinity of towns the case was better, but even here much of the best land is in timber, and vast tracts are now long idle that were once under cultivation. Many informed us that in the locations in which they lived but about half the area of land was in cotton now, that was in corn and cotton before the war.

THE LABOR QUESTION.

The great amount of land once tilled, but now unimproved, is chiefly due to the decrease in the number of plantation hands. Most estimate that the number of hands now at work in the fields is but about half what it was in 1860. The causes of this diminution of farm laborers may be accounted for about as follows: The women, as a rule, no longer work out of doors. Sickness, particularly contagious diseases, contracted during and since the war, have carried off large num-

bers of both sexes. Sickness prevails to a great extent among them, and they are, in some cases, unable to employ competent physicians, and at other times are inclined to patronize ignorant "medicine men" of both the white and colored races. Of those who are well, many flock to the large towns, while others seek employment on steamboats and trains, or engage in the construction or repairing of railroads. As a rule, they seem inclined to change their location even when the new place offers no superior advantages over the old one. Many represent them as doing better this season than they did last, and more inclined to work steadily. Some work for wages, but the greater part, we should judge by what we could learn, work the land and receive part of the crop. The land owner, in most cases, furnishes the team, farming utensils and seed, and receives from one-half to two-thirds of the corn and cotton after it is harvested. He also furnishes the provisions for the family, receiving a like amount in the fall, or its equivalent in money or cotton.

ADVANTAGES FOR IMMIGRANTS.

From all that we could see or learn, we are convinced that the South at the present time offers superior advantages for straight-forward, industrious settlers, who have sufficient means to establish themselves on land of their own. The climate is inviting, the seasons long, the land is productive, and what is of prime importance to farmers of small means, it is very cheap. It is a timbered country, and stumps will for many years be in the way on such land as requires to be cleared; but those who have lived for years in a region destitute of timber will appreciate the advantages of having free of expense the material for their fences and houses as well as a supply of fuel.

The statement that the present settlers there do not want Northern men to come among them to settle, we are convinced has no foundation in fact. Probably they do not care to have more men come for the purpose of engaging in politics as a business; but we feel sure, judging from the manner in which we were received, and from the testimony of the many we conversed with, that "Northern laborers"—farmers and mechanics—would be welcome, and that they would be well and kindly received.

Virginians, Make your own Sorghum.

We call the attention of our readers especially to this article from the Lynchburg *Republican*. We endorse the sentiments of this paper, and if we can succeed in producing our molasses and sugar cheaper than we can purchase them, then, as a matter of justice to ourselves we ought to turn our attention to it. Therefore, we suggest the propriety of producing that which will stop up the channels through which our wealth passes out of the State to the amount of a half million of dollars per annum:

I take advantage of a question asked through the columns of your enterprising paper, to speak what I know respecting the success of the cultivation of Sorghum cane in this State, and its products as a sugar plant. It is a question which well deserves the attention and thoughtful consideration of all classes, but more particularly the farmer. A glance at the unsettled state of affairs in the sugar Islands, (which are even in a worse condition than Louisiana,) and the decrease in the sugar crop of Louisiana, make it a matter of prime importance to Virginia farmers to know whether they can make the cultivation of sorghum cane profitable by making from it a good, palatable and marketable article of sugar and molasses. The estimated quantity of sugar consumed in the United States is about 822,000,000 pounds. Of this quantity in 1855, 382,000,000 pounds, only, were produced in the United States—Louisiana at that time making 231,426,000 pounds. Under the present system of labor, and in consequence of a deterioration or defection in the seed, it has fallen off to 75,000,000 pounds. What the result of this state of facts must be is easily foretold. A large amount of capital will be sent, not only out of our State, but out of the United States for sugar and molasses. Now, we maintain that this immense revenue may not only be retained in our own

State, but bring capital into it. The most important fact connected with this question has been most fully demonstrated, namely, that sorghum cane will grow most luxuriantly with a most abundant yield of saccharine matter, usually containing from fourteen to twenty-two per cent. of sugar, varying according to the character of soil and the fertilizers used. We must remember that it was a comparatively new crop in this country—the seed only having been distributed from the patent office a few years before the war—and we must make proper allowance for ignorance in its cultivation and want of due care in the selection of the seed. When we consider these things, we may safely and reasonably conclude that our soil and climate are adapted to its growth. Our climate in many respects is exactly what it requires, resembling that of China, a wet spring and low temperature, followed by a hot August and September. All have noticed that when the hot summer's sun has parched all else into the sere and yellow leaf, this plant alone seems nourished and invigorated by it. But we are met by objections which have force in them, and which, if true, would be fatal to the position we take, *i. e.*, that it is ruinously exhausting to the soil. The same might be urged against any crop under which an improvident system of farming, particularly as against the great staple production of our State—tobacco. The waste lands in the first settled portions of Virginia smiled with an abundance, that made the heart of the pioneer to feel that the God of Israel was truly their God; yet, the continued cropping of tobacco has cursed them with the blight of the desert. Thus it would be with sorghum. One who has studied and analyzed this cane writes thus, after giving the analysis of the plant: "These ingredients are present in almost every soil in sufficient abundance, when they have not been removed by improvident cropping. As sugar is composed of elements derived entirely from the air, (carbon and water,) it is evident, as in the case of Louisiana cane, there would be no necessity for solution, if all that has been taken from the soil has been returned in trash. Practically, however, this cannot be effectually accomplished. The uncrystallizable portion of the piece contains salts, which are annually removed with the molasses that is marketed These are chiefly phosphate of lime, potash and the carbonate of lime." We have fertilizers in our midst containing these ingredients and with a return of the crushed cane, in the shape of manure, and rotation of crops, we think this difficulty obviated. And so it is with every other crop. That taken from the soil must be restored by nature or artificial means. In our limestone regions the disintegration of the rocks will generally, with the ordinary fertilizers found on the farms, fully restore it, and in the other sections, gypsum may be used advantageously, or marl, which is clay and lime. Now we come to the question of real importance:

CAN SUGAR BE MADE FROM IT?

All have believed for a long while, and some have known the fact, that it could. It has been in common use in China, and in 1853 some was sent to California from China. But among us it was left for the enterprising people in the West to take the lead in this matter. A process was discovered by two farmers in Ohio for making sugar, beautiful and astounding in its simplicity, and admirably adapted to the wants of our people, because of its completeness and cheapness. There is in this city, and may be seen at the store of George D. Davis & Son, a small quantity of sugar made near Louisville, Ky., brought on by the agent of the Southern Sorgo Company, which is not inferior to any brown sugar we have ever seen. It has been mistaken by some of our sugar merchants for Demarara and New Orleans refined "C" sugar. It is of a bright straw color, with about the body and quality of the sugar before mentioned. The process is so simple that any person of ordinary intelligence can operate it. No chemicals or foreign agency whatever are used throughout the entire process, and yet no trace of that disagreeable taste so familiar and unpalatable to those who have made the molasses by the ordinary mode. It is the yield, though, which will most astonish every one. There is not an acre of ground in the State which will not yield from fifty to three hundred gallons of syrup. This, how-

ever, varies very greatly in different soils. Average corn-land will produce generally, with careful selection of seed and proper preparation of the soil, from one hundred and twenty-five to one hundred and fifty gallons of syrup, and from one gallon of syrup made by this process you get from five to seven pounds of sugar, with a residuum of from three to five pounds of molasses. A gallon of syrup weighs eleven pounds, and hence there is only a loss of one pound in separating the molasses and sugar after granulation. In other words, an acre of land ought to produce from seven hundred and fifty to one thousand pounds of sugar, and from fifty to sixty-eight gallons of molasses. Our merchants say that this sugar would retail in this city at fifteen cents per pound, and the molasses at from eighty to ninety cents per gallon. The skimmings make a fine quality of vinegar. The seed or stalk will make a dye for dyeing red, purple, and yellow, and extensively used in coloring silks. The cane leaf makes the finest of forage. The seed are not surpassed by either corn or oats as food for stock; will produce in distillation as much, if not more whiskey per bushel than corn. The product of the seed per acre is from twenty to forty bushels.

The cost of the necessary machinery will not exceed the following estimate for a field of thirty acres:

Two self-skimming coagulators and furnaces,	$8 90 00
One finishing pan and furnace	65 00
An ordinary sorghum mill,	100 00
Contingent expenses, for boxes, troughs, &c.	75 00

This machinery should be under a shed, with a room attached, which can be kept at a pleasant temperature, with a stove to assist in granulation. We do not add this in the above estimate, as most any farm with the ordinary out-houses will have such a room on it. An ordinary sorghum mill will do, though the aggregate loss with an inferior mill is very great. This estimate is made up from the prices furnished by the company at Louisville, and will probably exceed the cost, if purchased here. Here, then, within the reach of almost every farmer is an additional source of wealth and independence for a small outlay, which the first year's crop will return with a handsome profit. The crop is less troublesome than tobacco, and under the present system of taxation will, at the end of the year, put more money into the farmer's pocket, and not interfere so materially with the cultivation of other crops. The farmer's clubs in the different counties of the State should take this matter into consideration at once, with a view to obtaining a patent right for this valuable discovery. The agent is in this city at present, with authority to dispose of it at such prices as will place it in the reach of every farmer in the State. In counties where no farmer's clubs exist, let some energetic man take hold of it as a public blessing in our prostrated condition. The gentleman who has charge of this right courts investigation, and to that end will pay the expenses of a committee from this State to Louisville, to examine the process and machinery. The crop should be planted in May, and there is no time to lose in this matter. We believe there is money in it to the Virginia farmers, and the capitalist who will purchase the right for the State with the view to selling county right or farm rights.—*Lynchburg Republican.*

What Makes a Bushel.

As our readers may be interested in the number of pounds to the bushel of various products, we subjoin the following table for future reference, which we take from the *Farmer's Home Journal*:

Wheat, sixty pounds.
Corn, shelled, fifty-six pounds.
Rye, fifty-six pounds.
Oats, thirty-two pounds.
Barley, forty-six pounds.
Buckwheat, fifty-six pounds.
Irish potatoes, sixty pounds.
Sweet potatoes, sixty pounds.
Onions, fifty-seven pounds.
Beans, sixty pounds.
Bran, twenty pounds.
Clover seed, sixty pounds.
Timothy seed, forty-five pounds.
Hemp seed, forty-five pounds.
Blue grass seed, fourteen pounds.
Dried peaches, thirty-three pounds.

The Cotton Caterpillar.

We call the attention of our readers to the following report on the cotton caterpillar, which we take from the monthly report for July, 1867, of the Department of Agriculture at Washington.—Ed.

As the cotton caterpillar has already made its appearance unusually early in the season, we publish the following letter which the Department of Agriculture has received from Mr. G. W. Morse, of Natchitoches, Louisiana. The plan he recommends is doubtless good, as should all the planters combine to destroy the caterpillars when they first make their appearance in isolated plantations, before the moths have hatched out of the chrysalides, the second and third generations, which do all the damage, would not appear; or if they did, it would be in so few numbers, as to do comparatively little harm to the crop. The department, however, has no power to authorize postmasters to employ laborers to destroy them, but if public meetings were held in counties, the planters might adopt some plan by which combinations could be formed for their mutual benefit; for although a planter may feel comparatively safe as long as the worm is not in his own fields, yet if his neighbor's plantation is infested by them it is of the greatest importance to him to destroy them at once, before the second and third generations migrate to his own cotton and ruin the crop:

Washington, D. C., July 17, '67.

Sir: It is reported by the newspapers that the cotton worms have again made their appearance in Louisiana, and as soon as they shall have time to grow to their full dimensions, and roll themselves up in the leaves, we shall probably hear, as usual, that they are all gone, or that the report was without foundation.

Believing that they have appeared, and that the greater part of the crop may yet be saved, I hope that I shall be excused for troubling you with this communication.

Many years ago I investigated this subject closely, surrounding a stock of cotton by misquito netting, and raising the worm in that way. I ascertained the following facts:

1. The moth, or cotton fly, will deposit from three to five hundred eggs. These eggs are of a blueish green color, and seem to be glued to the under side of the leaf.

2. These eggs will hatch into worms in four days' time.

3. The worm will generally attain its full size in about eight days, and roll itself up in the leaf.

4. In eight days afterwards it will come out in the form of a moth, too well known to require description here.

5. The whole time required for one generation is from twenty-six to twenty-eight days.

It follows, then, that a single worm on the first of July is capable of producing five hundred worms by the 28th of the same month. On the 5th of August these worms give us five hundred moths, part males and part females. We will suppose there are three hundred of the latter. This would give us 150,000 worms about the 24th of August, and these multiplied again by 300 would give 45,000,000 as the number produced by this one worm about the 20th of September. One hundred worms, then, on the first of July are capable of producing 4,500,000,000 on the 20th of September. Now, if these one hundred worms could be destroyed during the first few days of July, or even most of them, one month's time would be gained, and that month the most essential to the maturity of the crop.

All plans of destroying the moths by fires in the fields, or by any other process of which I have yet heard, are entirely fallacious, and only do harm by leading planters to misapply their energies. The worms generally begin in some low place in the field, and at first eat round in a small circle, being few in number.

The only means by which the crop can be saved, is to kill this first lot, or at least, all that can be found of them, remembering always that every worm destroyed now is equal to many millions in less than three months' time. If this can be accomplished, I am confident that

one or two months' more time will be gained for the maturity of the crop.

Since we now have military governments in the South, I have thought that your official sanction in this plan would give it such weight that the commanding generals of Louisiana and Texas might endeavor to have it carried into execution by giving notice of the time when all should commence, or by other means which to him might appear, and his orders, I am confident, would be obeyed by the people with alacrity. To be successful the operation must be general, for it would be futile for one or two planters to attempt it while the rest remain idle. If I am correct in my views, and success should not reward our efforts this year, owing either to the want of concert of action or the lateness of the season, public attention would be directed to the proper course of proceeding, and another year better results might be obtained.

If the postmasters throughout the cotton region were properly instructed from your office, and authorized to offer a reward for the first cotton worm, moth, or egg which should make its appearance in their vicinity, and then authorized to employ laborers to destroy them, or have power to call out everybody for that purpose, no more crops would be lost by the cotton worm. The great difficulty is to obtain general action in time to produce the required results.

I am, sir, very respectfully,
your obedient servant,
GEO. W. MORSE.

Hon. J. W. STOKES,
Acting Commissioner of Agriculture.

How to Make a Thick Osage Hedge.

Considerable anxiety is now being manifested hereabouts by many farmers in regard to FENCES. Fencing material of all kinds, as well as fire-wood, is steadily growing scarcer and dearer. Fences on every hand decaying must be renewed in some way: and, driven by necessity, farmers are gradually planting Osage orange and honey locust hedges. Many have tried white willow, but generally failed to make a fence, either through want of knowledge of how to manage it, or NEGLECT, or both. We have some Osage hedges in this country fifteen years old and there is no winter-killing; they are generally on sandy, gravelly ground, with a porous or dry subsoil.

I want to tell your readers how to grow or train the Osage so as to make a tight fence that will stop pigs, chickens, and even rabbits to a great extent. Set the plants eight or ten inches apart; cultivate well the first season. In the fall mulch it well to prevent winter-killing. This mulch will keep the weeds down, with a little attention, for the next two years, and will also give a vigorous growth to the hedge. After three years' growth in hedge-row, plow a deep furrow two and a half or three feet from the hedge, with landside of plow next the hedge, and have two men, one with a shovel, the other with buck mitts and thick boots to bend (not cut) the hedge and tramp it to a horizontal position, or level with the ground diagonally with the line of hedge. Tramp the tops in the furrow, and throw dirt on them to hold them in position, leaving two and a half or three feet of the base uncovered. Thus treated, they will send up from ten to twenty vigorous sprouts from each plant. This being done in April, the latter part of June clip it within six inches of base of sprouts. The September following clip it six inches higher, and continue the clipping semi-annually until your hedge gets the desired height, and it will be two or three feet thick at the base and impassable to man or brute.—*Ger. Telegraph.*

AT the late farmer's convention at Manchester, N. H., Colonel T. S. Lang, of North Vassalboro', the owner of the famous stallion, General Knox, stated that his horse had netted him sixty thousand dollars, and increased the value of the horse stock of Maine many hundred thousands.

"IF ANY one has stumbled and fallen, help him up gently, and pass on before a crowd gathers."

A FRIGHTENED animal cannot use its senses aright; it must first be reassured by gentle treatment.

The Hog---His Faults, Virtues, and Claims.

May we not be allowed to say something in favor of that much abused, but useful and valuable animal, the hog?

The hog plays an important part in commerce, agriculture, and domestic economy. He is a sort of citizen of the world. He thrives and multiplies in every part of the globe, except the Polar regions. The familiar burlesque of the "hog on ice," is enough of itself to demonstrate the unsuitableness of those regions to the hog. With this exception he can prosper everywhere. He is in his ubiquity like the herring, which is found in all waters. He does not rank high in the social scale, being considered, indeed, less of a gentleman in his habits than any of the animals. Like the elephant, the rhinoceros, and hippopotamus, he is addicted to wallowing in the mire. Naturalists tell us that he does this to destroy vermin, and to protect himself from the bites and stings of insects. This has been his habit from the earliest times, and will remain such as long as he continues on earth. "The sow that was washed returned to her wallowing in the mire." There is no reformation for him in this particular. Another of his peculiarities is his grunt. Another is that he carries straw in his mouth when it is about to rain. The hog has played an important part in religion, having been placed under the ban of two great religious sects—the Jews and Moslems. Their law-givers and priests prohibited his flesh as an article of food. These two religions had their origin in the hot climates of the East, where swine's flesh was found to be unwholesome, and its prohibition was a sanitary measure.

There are wild hogs, as there are wild horses and dogs. The historic wild boar, the Peccary, and the African ground hog, are some of the varieties. How and by whom the hog was first domesticated, we leave to the more curious to enquire. The hog finds his paradise in Ireland, where he is tenderly adopted into the social circle. Every tenant raises a hog as he raises his children, and with that hog he pays his taxes. The Romans valued the hog, and with all his uncleanness he was reckoned the fittest sacrifice to Ceres, the goddess of the harvest.

We read that Mr. Hog was introduced from Spain into Hispaniola, by Columbus, in 1439; into Florida, by De Soto, 1538; into Nova Scotia and New Foundland in 1553, into Canada in 1608, and into Virginia in 1609. It is related that here they multiplied so rapidly, that the colonists were compelled to palisade Jamestown to keep them out. Different breeds are preferred in different localities, according to the fancy of the farmer, facilities for raising, or the particular object of the raiser. The following are some of the varieties that have by turns been in most favor: the Chinese, the Neapolitan, (the most celebrated of the Italian breeds,) the Irish grazier, the Berkshire, the Cheshire, the Essex, the Woburn or Bedford breed, sent to General Washington by the Duke of Bedford, (being a cross between the Chinese boar and the large English hog,) the Middlesex, the Chester, the Hampshire, and the Suffolk, which last originated from the old Suffolk, crossed with the Chinese and Berkshire. Without entering at length into the discussion as to the best breeds, we may say that there are hogs that seem to be capable of taking on more fat than others. After all said, written, and done, the *corn-breed* hog, that is supplied from the time that he can crack corn to the time he falls under the knife, with as much corn as he can consume, he is the best of all. There is a wonderful correlation between the hog and Indian corn. We shall not undertake to describe the old-fashioned unimproved Virginia porker, which, having been left to roam at large and scuffle for itself, contracted a shape so strangely ludicrous, and habits so wild, queer, and perverse as to be a notable curiosity. If we remember aright, this eccentric variety has been described at length by "Moses Addums," in his learned lecture on "Bacon and Greens." We take occasion here to say, that if in aught we have said, or further say, we should trespass upon the demenes of that favorite author, it will be unwittingly done.

The fecundity of the hog family is one of the marvels of nature. That animal

is capable of procreation at the early age of one year, an age at which the human infant can scarcely crawl, is without teeth, and is unable to express itself, and when the calf and the colt are still sustained by the mother. Mrs. Hog produces eight to twelve, and even more at a birth, and that twice a year. Vauban estimates the product of a single sow, with only six young at a time, in ten generations, to be about six millions five hundred thousand, from which he deducts five hundred thousand on account of accidental death. The ease with which the hog is raised, his omnivorous appetite and his industry and self-reliance make him the cheapest of all animals to keep. To the poor, he is, indeed, a precious boon. To "increase and multiply," seems to be regarded by the hog as his first duty.

The whole number of hogs in the United States in 1856 was put at forty millions, about a hog and a half for every man, woman and child of the then population. Valued at $7 per head, the aggregate value would be $280,000,000. What a country this for hogs and Indian corn! With them it will be easy to ward off starvation.

There is no part of the hog that cannot be utilized. His flesh, fat, bristles, hair, hoofs and bones are all turned to account. His very entrails are eaten. The divisions into which his body are cut are as well known as the divisions of the earth —hams, shoulders, middlings, jowls! His ears and feet are made into souse, and his brains make a choice dish for the epicure. His tail has for ages been claimed by successive generations of children as their peculiar property. Tradition points out the way of cooking it—roasting on the coals—and of eating it without salt, and held in the fingers. Spare-ribs and chine! Is there a man with a heart in his bosom and teeth in his head who does not delight in them?

Some call the hog stupid. Stupid, indeed! His intelligence is of a high order, and his instincts are as sharp as—well, a razor or a briar, or a steel trap. His courage, when he gets his bristles up, and chooses to use his tusks, make him the terror of both men and dogs. He knows "a hawk from a hand-saw," and can tell his feeding time as well as if he carried a clock in his body. He is an early riser, and the familiar "c-h-o-a-r-k, c-h-o-a-r-k" of his feeder just at the peep o' day never fails to be answered. He never misses roll-call, though he cannot be called a soldier. A "hog in armor" is said to be the most ridiculous of all things. His sagacity in determining latitudes exceeds that of the most scientific men.

What would mankind do without the hog? He supplies food to millions. He is the great crop of the West. Those who are too distant from market to sell their grain and truck products feed them to the hogs, and then sell the hogs, thus killing two birds with one stone. Bread is called "the staff of life," the hog is life itself. The beauty in her silks and satins may turn from him in disgust as he emerges from his sty all reeking with mire, but she eats him, and enjoys him, too, when he appears on the table. It has been observed by those accustomed to cater for the public, that the favorite diet of ladies generally, however delicate and dainty, is *shoat.*

The hog is a mighty institution—a power in the land. In spite of his snout, of his bristles, of his grunt, of his foul habits and his perverse ways, the hog deserves to be held in high esteem; to be treated kindly while living, and to be killed gently, and with as little pain as possible, when his time comes. The time of many is at hand.—*Richmond Whig.*

Clover is the cheapest and best manure that can be had. Nothing pays better than a field of good clover plowed under. It enriches the soil quicker than barnyard manure, and puts it in better condition. To plow it down well, if it stands thick and high, each morning a roller should be drawn over as much as can be plowed in a day, and a heavy chain should be fastened to the point of the plow beam to drag it into the furrow. In this way it can be completely covered.

Clover contains all the elements needed to enrich the soil for all kinds of grain, and in larger quantities than other manures.—*Experimental Farm Journal.*

Agricultural Matters.

It is gratifying to learn of the increasing interest manifested in agricultural matters in this immediate section. District and county agricultural meetings are well attended and great interest taken therein. The attention of the people is being called more and more to agricultural subjects and they are becoming more and more an agricultural people. After all, the future wealth of the South must depend upon the tillers of the soil. With us it is the only solid foundation of prosperity. We know the advantages of manufacturing, of mining, of commerce, but the foundation stone of all these enterprises must rest upon a successful system of agriculture. The people in this immediate section of the State are retarded in their progress by the very advantages and blessings which nature has bestowed upon us with a lavish hand. The fertility of our soil and the geniality of our climate have heretofore been serious drawbacks to our advancement. To be more explicit, it has been too easy for our people to make a living. This fact has encouraged indolence and retarded enterprise. We have too long been accustomed to skim a livelihood off the surface with little labor, while the untold wealth of our soil has been permitted to rest undisturbed. If we expect to become a prosperous and wealthy people this system must be revolutionized. We must become in fact, as well as in name, an agricultural people.

There is no business fit for man's consideration which is not worthy of thought and study. To make farmers we must educate ourselves up to the standard which this important business demands. We must add the experience and observations of others to our own judgments and enterprise. We must make ourselves familiar with our necessities and the means which science and skill have invented and constructed to provide for them. We must cast aside old notions and systems and adopt new ones. We must cultivate the soil for profit and not merely as an occupation or for a bare support.

We trust we see in these agricultural meetings in the several counties in this immediate section an important movement in the right direction. By such means must the initiatory steps be taken. Our people must first be brought to think of, and interest themselves in, agricultural subjects and discussions. Their feelings must become enlisted and their minds will seek information. Their labors will then be more intelligently and economically expended. Our lands will be cultivated not for the present only, but for the future. They will no longer be robbed of their fertility and value by neglect and exhaustion, but will improve by proper cultivation, and increase in value while bestowing wealth upon their possessors. If our planters and farmers can be brought to realize the importance of their occupation not only upon their own welfare, but upon the prosperity of the country, they would at once see the necessity of raising its standard. The meetings of educated and intelligent men, the discussions of agricultural subjects, the reading of agricultural works and magazines, the application of theory to practice, will sooner accomplish this desirable end than by any other available means. We are therefore a well-wisher to our agricultural societies and publications. Let discussions and articles be practical, instructive and explicit. Avoid gossip, for agricultural gossip is as little useful as social gossip, and may become as mischievous. Give facts, but do not omit causes. The names of successful farmers, or the kinds of crops or the size and quantity of the produce, may do to satisfy a laudable curiosity, but the system of cultivation, the character of the soil, the causes which produced the result, with common-sense applications thereupon, is what is needed and that only which will confer real benefit to the listener or reader. By such means agriculture will soon again become the cornerstone of Southern prosperity and power.

Indian Corn.—Corn is believed to be native to America, and from it was introduced into Europe. Some European writers say that maize was known in Europe before the discovery of America, but they produce no proof of it. The fact is, it cannot be sustained.—*Ex. Farm Journal.*

It is speed that kills the horse.

Castor-Oil Bean.

The culture of the *Palma Christi* is extending in Texas and in Florida, as well as other Southern States, and is found to be profitable. This plant delights in a deep, dry, sandy loam, and is claimed to be, like clover, an ameliorator of the soil, and to such an extent that land owners have offered the gratuitous use of land to be planted in this crop. The department is frequently called upon for information concerning its culture. It is said to be a native of India, but has been dispersed throughout the temperate portions of the civilized world. While it grows only to a height of about three feet towards the northern limits of its culture, it becomes a plant of eight or ten feet in semi-tropical regions, resembling a small tree.

The oil is extracted by boiling the seeds, or by pressure in a hydraulic press; the latter process yields oil of the best quality. In India it is mixed with water, and the water evaporated. The hydraulic press was used in St. Louis as early as 1847. A press, patented by Mr. Latourette, October 28, 1851, greatly increased the product. One of these presses is estimated to use 150,000 bushels of beans per annum, making 400,000 gallons of oil.

A thorough preparation of the soil is required, as for planting corn or any other hoed crop. The hills should be six feet apart in good soil, in latitude 30° to 35°. If very rich, or further south, the plants will be near enough at seven feet. In more northern locations, as in southern Illinois and Missouri, the distance might be five feet, but not less than four. It is convenient to leave a space every half dozen rows sufficient for the passage of a team in gathering the beans. Two quarts of seed will plant an acre. Soaking the beans in hot water before planting will assist germination. But one or two plants should be left to grow, though half a dozen or more might be allowed to grow for the use of cut-worms. The culture is simple as that of the common bean or maize, nothing being requisite but frequent loosening of the surface with a cultivator until the plant begins to monopolize the field and shade the ground. Frequent culture, as with corn, is important, but care should be taken not to injure the stalks by careless movements of the team.

The harvesting commences from the first to the middle of August in this country, when the pods begin to turn brown, and it should not be delayed till the husks open and the beans are expelled. The entire spike, containing many pods, should be cut off. Drying yards, with exposure to the sun, the surface well rolled, have been employed, but are not deemed necessary. The beans should be kept dry, as sprouting nearly destroys their value, and cleanliness is important. The price varies considerably, according to the importation and production, and also locally from proximity to market and other causes. It has been as high as $5 per bushel within three years, and as low as $1.25. Twenty bushels per acre is an average yield, though three times as much has been obtained.

Preventing Weevil in Wheat.

It is said by those who have tried it, that they never lost any wheat by weevil after salting it. The wheat should be allowed to stand in the field in shock ten or twelve days, when it should be threshed, fanned and salted. Half a pound of salt is the quantity generally used to a bushel of wheat. If the room or granery, in which the wheat is put away, is dry, by following this method of salting the wheat is sure to keep well. Wheat, when put up in the usual way, will always diminish in bulk as it gets old, and many persons consider that it will not yield as much, or as good flour, as when it was fresh from the field. Be this as it may, the diminishing in bulk to which wheat is subject, is prevented by salting, in the manner above stated. The best salt adapted to this purpose is that brand known as the "Kanawha salt." This salt is preferable on account of its all dissolving, and being soon absorbed by the wheat. For the first eight or ten days after salting, the wheat, if examined, will be found somewhat damp; but if examined a few weeks later, it will in all cases be found

perfectly dry, having kept cool all the time.

The advantages claimed by those who practice this mode of salting and saving wheat, are as follows:

1. It preserves the wheat with more certainty than sunning.
2. The wheat does not lose in volume, or weight, by long keeping.
3. It makes more and better flour.
4. It costs much less labor.
5. The wheat is better for seed, because it is preserved in a perfect state. There is not enough salt in it to prevent it from germinating; but there is enough to stimilate it to sprout vigorously.—*Rural American.*

The Farm Workshop.

I stepped over to the Squire's the other day, and found him busy in his farm workshop. It was morning, and blowing terribly, and the blocked roads denied passage for man or beast to the village. The Squire is a snug farmer, and his stock was all comfortable in warm stables and other shelter; even the poultry hardly knew of the storm without, for the "biddies" cackled, and a junior member of the family, who had especial charge of that department, exhibited a "baker's dozen" of eggs as the day's product. But the Squire and his hired man were at work in the shop.

The farm implements were being thoroughly overhauled. Nearly all needed paint, and some broken or weak timber had to be replaced. I heard the hammer ringing on the anvil as I approached the door, and found the Squire just finishing the sharpening of a set of drag teeth, which had been worn by the summer's work. The hired man was washing, oiling and mending the harness. The Squire threw the last drag tooth on the finished heap as I closed the door, and taking off his apron, he reached me a pipe, and lighting another, sat down for a neighborly chat. Our talk was of home and farm topics, and the Squire spoke of his workshop. "I built it years ago," said he, "and stocked it with tools for working iron and wood, and it has paid me well. My farm work never lags because an implement is poor and out of repair, and many a journey to the village carpenter and blacksmith has it saved me. I take a great deal of comfort here, too, and never get the fever—as some of my neighbors do, in winter time, of running to the village.

My shop has a good influence on my boys; they are all handy with tools, and have gained knowledge and dexterity that will be of use to them in the future. On the shelf, yonder, is a model of a new harrow, which my second son James made; and the cattle fastenings you liked so well in my stable were contrived and made by his brother. No investment has paid me better than my shop, and I am sorry that I didn't have the advantage of one when I was a boy."—*Rural New Yorker.*

The Ramie Plant.

A great deal of fuss has been made about this grass, and many credulous people have seen visions of large fortunes to be derived from its growth and cultivation. We are not surprised at the impression made upon the public mind, and have had half a dozen circulars sent us which we didn't use, not because we are so much wiser than other people, but because we never advertise gratuitously, and only lend our columns to the discussion of facts for the public good. Being in some doubt about the Ramie plant we said nothing of the circulars we had received, and now have abundant reason to be gratified at our caution. For the report of the Department of Agriculture (March and April) p. 137, shows that this grass is as uncertain as a grass widow. In another column we print a correspondence between the Hon. Wm. Sprague and Commissioner Capron, in which our readers will see that the Department for very good reason is not disposed to heighten the extravagant notions already abroad in regard to Ramie. The great difficulty in giving sufficient flexibility to the fibre for manufacturing purposes settles the question against the speculators, and until this difficulty is obviated by some inventive genius we trust we shall hear no more of the Ramie grass.—*Norfolk Virginian.*

Don't Come to the City.

Stay away from the city, young man.

Why?

Because you are not wanted there. Too many young men already are there—too many struggling for the fortune that never comes, and acquiring, instead, tastes and habits which lead to perdition.

Are you a farmer's son?

Be a farmer's son—one of the bone and sinew of the land! Don't look enviously at that equipage as it rolls past, bearing the rich merchant to his three months' siesta at his "country seat." You are as independent as he, and far more happy. If he lives to see fifty, it will be a wonder, while it will be a wonder if you don't live to be seventy. If he has gold and soft raiment, you have more—you have that consciousness of ownership in the soil which makes you a very lord in the manor, and though that manor be but a few acres, it is enough for your happiness, if content, industry and intelligent use of time rule your ways.

Are you a young mechanic?

Remain in the neighborhood where you are known, and where your services are required; or if a broader field is necessary, don't come to the over-crowded city, but go to the west, where every energy, every talent is in demand, and every man is reckoned at his true worth. Thousands of mechanics in the great cities struggle for years for a simple livelihood, and never hope to obtain a competence, because they see that it is of impossible acquisition. Can you, too, hazard that result to all your young energies and well-grounded ambition?

Are you a student?

Stay away from the city as from an evil genius! Here are libraries and societies and learned men, it is true; but these are hard to reach and enjoy; the learned men are busy and reserved; the societies are either very exclusive or very common; the libraries are of practically little value, save to mere readers. A small library in a country town, with the encouragement and aid which a studious young man always there receives from the ministers and doctors and lawyers, is far more sure of reward than any influence which the city can promise.

If the city is the place where men of talent rise to the surface, it is equally true that there men of mediocrity go down; and also true that not one in a hundred is successful in obtaining just the position for which he is fitted. Competition is so strong and persistent that few men, even among those who are deemed successful, but have changed their business or calling many times—compelled as they have been to avert disasters by abandoning what at first seemed promising enterprises.

To come to the city is to encounter odds against your industry and ability which do not exist anywhere else—the odds of capital, of combination, of aggregated numbers, of superior talent; while haunting your footsteps, and dogging your very shadow, are influences and temptations before which even the stoutest of principles quail. What are these influences? Let the records of ten thousand wrecked lives tell—wrecked, though clear of head and firm of heart, because the tempter assumes so many shapes and forms that they grow weary of combatting him.

Stay in the country then! Grow, expand, flourish there, sure of becoming one of the leading men of the village, county town, or district, if you really have merit and worth. You might succeed in acquiring a competency after years of struggle in the city, but the odds are so heavily against such success, that it is painful to witness any attempt to achieve it.

Be content and happy in the country, always doing your best, and the result will prove the wisdom of your course.—*Bonham's Rural Messenger.*

THE Utica *Herald* says: Averaging the results of several careful experiments in feeding corn to hogs, shows that two bushels of corn in the ear, or one bushel of shelled corn, made nine and seven-twentieths pounds of pork, while the same amount ground into meal and mixed with water made eleven and one-eighth pounds of pork.

THE prize farm of Michigan, 160 acres, paid a return of $22 60 per acre, beside supporting a family of ten persons.

The Reconstructed Farmer.

JAMES R. THIGPEN, } - - - Editors and Proprietors.
JOHN S DANCY, }
WM. BIGGS. - - - Business Editor.

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TARBORO', N. C., JULY, 1869.

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FARMING CALENDAR FOR EDGECOMBE COUNTY.

Average range of thermometor at Tarboro', N. C., for the month of May, 61 degrees Fareinheit.

The month unfavorable for farming. An unusually cool month, but no heavy washing rains. The season, up to 1st of June, very backward, and great complaint of stand of cotton. Some plowing up and replanting. Great improvement in the last six days.

As we have to write our editorials some three weeks previous to the publication of our journal, it is impossible for us to give an accurate description of the crop prospects, at the time our journal reaches our patrons.

We have had a very wet, cold May, and many thought it probable that the cotton crop would prove a failure, in consequence of a bad stand and the scarcity of seed.

At this writing, June 8th, the stand is pretty good, and the prospect is such as to lead us to believe that we may realize a fair crop.

The corn and small grain crops are good. By the time this number of the RECONSTRUCTED FARMER reaches the planters south of thirty-six degrees latitude, they will have some respite from the laborious and incessant toil of last month, as their crops of small grain will have been harvested, and their corn crops are either finished, or nearly so.

Their cotton crops are comparatively easily managed, as nothing remains but to plow and keep the weeds out.

July, to the farmers north of thirty-six degrees latitude, is the same June is to the South; they see the hundreds of millions of dollars worth of grain and hay that is to be harvested, and consequently they must give themselves up to unremitting toil for the next month.

We presume the farmers of the South have made some estimate of the prospect of the present crop, as well as the net profits, and in a few weeks the planters North will have made a similar estimate of the crop and net proceeds.

When the farmers of the two sections shall have balanced accounts for the year, which do you suppose will have the largest per cent. of net profits?

Farmers South, view your Situation.

While you are in possession of as fine soil and climate, and, perhaps, perform as much labor as any people upon face of the globe, still, when you come to foot up the bill of expenses, you find there is very little income, except under the most favorable circumstances of a heavy crop and price.

Suppose a bad crop of cotton fall to your lot, and the price comes down, as in 1867, what then, will be your condition? Pay your bills for pork, hay, &c., &c., to the Northern planters, and you will have the answer.

We insist that you should endeavor to understand your true condition, for as long as you depend upon your Northern brothers for the prime articles of consumption from year to year to run your business, you can never prosper.

Therefore, we advise you to adopt the rule to be certain every year at housing time to have corn and pork of the old crop on hand of your own production.

We are aware that a majority of cotton planters hold to the idea that they can make a larger profit by purchasing their supplies to produce cotton, than to raise them.

Here we differ, since we are satisfied it is not the planters that produce the most cotton to sell that realizes the largest income.

The farmers that adopt the rule to produce their own supplies at home, and the remainder in cotton, are the planters that have the largest income. We are of the opinion that the farmers who rely entirely upon cotton, pay a larger tax in many respects, than they are aware of, which they do not take into their account of expenses; for instance, they cannot improve their soil as much as those who plant all the cereals that are necessary for home consumption, because it requires more labor and a longer time to cultivate and house a cotton crop than other crops.

This deterioration of soil is seldom or ever taken into the account. Therefore, we insist that you take it down.

In the next place, go upon these cotton farms, and notice their stock; for instance, their mules (to say nothing of their cattle and hogs, if they have any,) and you will see that they are in such a condition, that it will take, as a general rule, three mules to do the work two ought to perform.

Here is an item of loss, the feed of one mule and the hire and rations for a hand, which is not added to the account. Besides this, these mules will not last half as long as if they were well fed and cared for, and consequently here is another item of no small amount be to placed to the account.

In addition to this, your business is of times disjointed to haul supplies in a busy season, which is a source of as much annoyance as expense.

The above are some of the items of expense that is, as a general thing, overlooked.

We are confident some of you will contend we have exaggerated in our estimate of the many items of the extravagance you have not heretofore taken into proper consideration.

If we are not mistaken, the articles you regard as the chief items of expense, are not, in our estimation, equal to those above enumerated, when properly considered.

What is the condition of the planters who have adopted the rule to produce a sufficiency of the chief articles of consumption, when contrasted with yours?

They are independent, while you are dependent. Why? Because they have the staff of life, *bread*, *bacon* and *butter*, which you are destitute of, or put to a vast deal of trouble, as well as expense, to procure.

They are contented, which is the greatest boon man can enjoy in this life, while you are discontented, from the fact your business is such that you are always more or less on the stretch to keep your farms in running order.

To be concise, we do contend that you must change this system of extravagance whether you wish to or not, for it is preposterous to hold to the idea that any people, living on a soil and in a climate unsurpassed as you do, can purchase the hundred of millions of dollars from abroad cheaper than you can raise them at home.

Suppose you were to plant one-half the land in cotton you now do, and prepare seed and cultivate it better, don't you believe you would make two-thirds or nearly as much as you do on all?

Could you not then turn your attention to manufacturing the thousands of articles of domestic use?

Just think, that while we live in a country that abounds in all the natural advantages that man can reasonably desire we stray so far as to even send abroad after tubs, buckets, hubs, felloes and spokes for wheels, &c., &c.

Farmers, you are creatures of habit, and we know habit is one of the worst things man ever undertook to give up.

But you should change, that your children may have the benefit of that instruction which is so much needed to develop the hidden resources of a bountiful nature.

As the period of the year has arrived when the farmers of the South have passed through the most important duties of cultivating the crop, it is necessary that they should so manage as to apply their labor between this and housing the crop to the best advantage, consequently, let us take a monthly review of the situation.

Do not neglect your stock. Your animals, which add so much to your comfort, should not be neglected. This month you should see that they have a supply of good water to drink, as stagnant or muddy water will certainly not be good for them, especially your milch cows.

They should be brought up every night to the stock lot, and some dry forage given to them in addition to a little salt.

Every morning, after the cattle are turned out to graze, shovel up all the droppings and place in a pen that is covered.

As for the hogs, perhaps it would be as well to haul vegetable mould and throw into their departments occasionally, as you could raise as much compost from them in this way as any other.

Let us remind you to furnish all your brutes with comfortable quarters the coming winter; and those who have not good quarters should lose not a single day after their crop is finished until the timber is procured and the houses erected.

We do say, that any man, be he whom he may, that is able to own a horse, cow, or sheep, is able to furnish them with decent quarters. We cannot see how any man or set of men, consulting their own interest, can allow their horses, cows, and sheep to stand upon the leeward side of an old house or stack and thus take the storms of winter. It really is a shame, to say nothing of the inhumanity, and it does seem to us, men ought to be compelled by law to furnish their stock with comfortable quarters or not be allowed to own them.

We suppose some of our readers will say we favor a sumptuary law. Sumptuary or not, we do contend that if men have not religion enough to give their animals, which God has given them for their profit, respectful and humane attention, they are unworthy to own them.

RUTABAGAS AND TURNIPS should be planted the last of this month or the first of August. Consequently, there should be no delay in preparing the soil for the reception of the seed.

Break the land thoroughly, and apply either of the following applications, and you will succeed if you cultivate properly.

First. Apply thirty bushels of cotton-seed broadcast to the acre, and harrow them in; then run the rows eighteen inches apart and sow thirty additional bushels of cotton-seed in the drill; on these seed make a small flat ridge, then open and sow one pound of seed to the acre; the rule is two pounds if we mistake not. Then cultivate, and thin out to about six or eight inches apart.

The cotton-seed should be killed, to keep them from germinating. If the cotton-seed cannot be procured, you may apply stable manure with equal success, by adding a double quantity; or you can mix three hundred pounds of Peruvian guano and two bushels of plaster, and sow as above directed, and you will make a good crop.

This is a very important crop, and strange to say there are farmers in our midst who do not produce a sufficiency to feed a calf. They are fine for cattle, and every farmer should raise them for his milch cows and oxen. They are also good to give to fattening hogs occasionally, when boiled and properly seasoned with salt, as they have a tendency to assist their digestive organs, consequently makes them quite healthy.

DITCHES should be attended to, especially the lead ditches should be gone over, and all obstructions thrown out, and the weeds, briars, vines, and bushes should be neatly shrubbed off, as this will prove of considerable aid to the ditches discharging their water.

These weeds, briars, &c., that grow upon the margin of ditches, naturally incline over in the ditch, therefore, they have a tendency to retard the water in freshets much more than many farmers suppose.

This is also a favorite season of the year to cut new ditches and canals in swamps.

LANDS that you intend to clear should be cut down and deaded in a short time. We suggest the cheapest and easiest way to clear up land is to cut all the forest down in the summer, and next spring, during some dry time burn it off.

If the land to be cleared is set in reeds, as is often the case in Eastern North Carolina, after it is burned off it will make a splendid pasture for your cattle, for the young reeds will spring up in immense numbers.

By the last of September the cattle will have effectually destroyed the reeds and roots, and also a great number of suckers that sprout out from the stumps, consequently, the roots become quite tender in a few months, and the logs will neither be so heavy or bad to burn in a dry time.

FENCES should be attended to in this month or in August. Go around the entire fence and rake each jam in a pile, including in this pile weeds, &c., and at the same time give the fence the necessary uprighting.

This not only adds to the neatness, but it repays the farmer, as his fence will last much longer than if shaded by a hedge of briars and bushes; besides this, you can plow next spring nearer to the fence, and also, the dirt thus raked up will add something as a compost.

Farmers often allow large weeds to grow and remain about their fences; this is wrong—they should scrape all these weeds up every summer, after the crop is laid by, if not before, and place them in a heap; and with this should also be

placed the litter from the entire back yard, together with the chips from the wood pile.

This will add not only to neatness of the place, but also to the general health.

Marl abounds in various sections for hundreds of miles on the Atlantic coast, and nature placed it there for our special benefit; therefore it is our duty to use it.

As this is a good season of the year to dig it, let all who may have the advantage of marl go to work and procure as much as convenient.

You may spread it at the rate of two two hundred and fifty bushels to the acre, or broad cast, or if you compost, put fifty bushels in the compost per acre.

This amount of marl, with twenty bushels of unleashed ashes, stable manure, or twenty bushels of cotton-seed, will make a good compost for one crop, and will make any ordinary land produce double.

In short, it will improve land and increase the crop on the best land. All who dig marl and will properly apply it, will certainly reconstruct their lands for the better.

Compost should be raised, as it is one of the chief auxiliaries to the success of the farmer.

In order to have a good supply, it will be proper to haul out all you can in acre piles where your lands are lying out.

These piles should contain from five to seven hundred bushels. If this dirt be composed of vegetable mould, it will add greatly to the fertility of the crop by hauling it out this summer or fall, as it will have time to rot and undergo that change which is necessary to become wholesome food for plants.

If it is not convenient to haul it this summer or fall, you may get, by raking in piles the hedge rows and by-ways, a sufficiency for all composting purposes, which is quite as good as if hauled out in the field; besides, when you get ready to haul it next winter, it will be lighter and much more easily shoveled.

This should not be neglected; for the farmer who manures and cultivates his land best, will be certain to succeed best. You who have never made the experiment, try it in a small way, and you will then agree with us.

Agricultural Societies.

In this age the various interests common to the economy of life are moved by some sort or other of management, associations, societies, "rings" or conventions. The leading interest of the world (the agricultural) has less of the co-operating in it than any other. Why is this, and should it be so? The State Agricultural Society has been reorganized, and an effort is being made to revive the annual fairs, which before the war did so much good in bringing the planters and farmers together from the various sections of the State. County and neighborhood societies or clubs occupy the same relative position to their localities as the State Agricultural Society does to the whole State. Let us, then, organize in each county a central association for the advancement of the planting and farming interests. Let them have monthly or semi-monthly meetings for the discussion of the various questions which daily come up to the mind of every enterprising farmer. There is nothing like a frequent "recurrence to fundamental principles" in matters agricultural. A monthly comparison of ideas will be of profit to all who will listen, heed, and go and do likewise. Neighborhood clubs of twelve persons, paying a monthly visit to each others' farms, discussing questions and criticizing, in a

friendly manner, every thing they see about the farm, are capable of vast good, and cultivate a kindly social feeling wherever established. What say you, farmers of Edgecombe, to "reconstructing" our *ante bellum* Agricultural Society? The crops will soon be laid, and let's meet in Tarboro' the first Saturday in August and reorganize.

WE TRUST that we shall be pardoned for again alluding to broad casting peas as a sure, rapid, and in our judgment, the most effective way of bringing up the lands in this region of country. It is the season of the year for making the experiment, and we wish to urge upon the farming community to try it. Try it by all means, on a large or small scale, as you please. You are treading on sure ground. The way is easy, cheap, and the experiments, heretofore, have been successful. Clover is the great fertilizer North, East, and West of us. It may do on some of our heaviest soils, but rely upon it the field pea is the clover of this section. Clover burns out badly on most of our lands in July and August. The field pea is in its glory at that season. Clover wants three years to perfect its work. The field pea wants only *four* months. Who has not noticed the fine effect of pea vines and hulls when the peas have been beaten out. It can be marked as far as the eye can see. Try it on land lying out, after oats, wheat or rye, or at the last plowing of corn.

AMONG the new inventions recently brought to the notice of the Farmers' Club of the American Institute, is "a geometrical harrow," from the circumstance of its frame being composed of two parts arranged one behind the other, and each having the geometrical form of an equilateral triangle. The harrow has a scraper attached to level down hillocks or knolls, and this scraper has a cross handle by which it may be guided.

HORTICULTURAL DEPARTMENT

J. B. CHESHIRE, D. D.....EDITOR.

"A Thing of Beauty is a Joy Forever."

The beautiful in nature is one of the main elements of man's social happiness; and it can be attained so easily and cheaply, that we are without excuse if we deprive ourselves of this one present enjoyment. The elements of moral adornment are every where at hand, and only need a little taste and labor to be combined into all the charms of grace and beauty.

In this respect our houses and homes in the country generally need a thorough *reconstruction*. Let any of our industrious farmers, who read this article, rise up from its perusal, go to his front door and look out at the prospect before him, and mark the scene that presents itself to his eyes. The hot July sun will be reflected in his face from the bare ground of his front yard; here and there may be seen a scraggy tree giving a full shade to the gloomy earth, but not enough to temper the scorching heat. The bare fence of his yard encloses a bare and cheerless space of gronnd, adorned with no flowers, relieved by no sward of rich verdant grass, and made cool-looking by no thick shrubbery. Every thing looks hot and dusty, and uncomfortable. Now this is the appearance of the surroundings of most of our farmer's homes. They are busy and thrifty in making the crops, in improving their lands, while the domain of home—the seat of social life and happinesss—is left dreary and unadorned. They either think they are not able to make those improvements which a refined taste would suggest, or that the means they used should be more profitably employed in adding to the increase of the farm. But a man cannot

make a more profitable investment than in making his home pleasant and attractive to himself and family. And this can be done at a very little expense, and by the employment this way of those few leisure hours that are often wasted in discussing unprofitable politics at the neighboring store or town. More real cheerfulness and invigorating spirits will be infused into a man by a few hours' labor in improving his home surroundings, and more real good done to the country, than by all the endless discussions of politicians and their plans to improve the times.

Let a man improve and beautify every thing about his home, and he will find the times improving at once; and he will begin to look upon life with some of that brightness and hopefulness which he gains from communing with the bright and beautiful in nature.

His home may be common, and his house have none of the characteristics of a model cottage or a picturesque villa; but let him do what he can to make it lovely in its homeliness, and he will soon make a magical transformation in its appearance. Let him train blooming vines, running roses, fragrant honeysuckles around his porch or piazza, and make "the ivy green" climb up and cover his unsightly chimneys. Let him in the fall plant in his yard the beautiful native trees of our woods: the beech, the poplar, the maple, the birch, the bay, the holly and myrtle; let him sow blue-grass upon his yard, and lay off walks, and cut out flower beds in the green sward; and let his wife and children aid him in filling them with annual flowers and bloomy bulbs; and let him plant beautiful shrubbery all along his walks and around the boundaries of his enclosure, till he makes his heretofore barren place "to bud and blossom like the rose."

And now let him look out from his front door on a hot July day, when he comes home heated and tired, from inspecting the labor of his farm, and what a different sight presents itself! His languid senses are invigorated with the cool breeze that blows from the overarching trees; his eyes are charmed with the varied hues of dazzling flowers; he inhales with delight the air laden with sweet-scented odors; and he enjoys every day a fresh sensation of pleasure from the wonderful transformation which taste and beauty have made in his old home.

And these beautiful home surroundings have a vast effect in influencing the character and disposition and happiness of a man's family. Children who grow up amidst the beautiful; who have constant opportunities of exercising their taste; to whom nature is every day making its silent, yet eloquent, appeals through the senses, in favor of the elegant and the beautiful, are more refined, more sensitive, more alive to the teachings of wisdom, they learn more readily, and advance faster in the arts of culture and education; they catch instinctively the hidden meanings of that voice of nature, which teaches them how to find "books in the running brook; sermons in stones, and good in everything."

The happy influence of these horticultural improvements a man will see in in his family every day. When his wife is wearied with her daily duties, which the present evil times and social changes have made peculiarly burdensome to our Southern ladies, leaves them awhile to mark the growth of her shrubs and flowers, she forgets all her cares in the pleasure awakened by seeing the new transformations which summer makes in her floral treasures; how the opening blooms reveal rare beauties and strange combination of colors; how a sweeter perfume

distills from some new flower; how every hour nature put on some new appearance in her ever changing robe; and the care-worn wife comes back into the house with new life infused into her, with the bloom of the roses transplanted in her cheeks, and the sweetness of the lilies diffused through her heart, and she radiates all around her the cheerfulness and brightness which she has caught from her communing "with nature and with nature's God."

And the influence of these things is felt not only in a man's home, but in giving character to a people and determining the advancement of a country in refinement and intelligence. If every man in the Southern land would do his part in making the country beautiful as well as productive, what a different appearance would we present to strangers traveling amongst us. Instead of the dreary, desolate-looking places that one passes on the roads, staring out in their unadorned discomfort, or glaring in the untempered light of white paint, we should behold such scenes as make our mother land, Old England, the glory of the world; houses of the people nestled away amidst vines, and shrubbery, and hedges, or crowning the hills with arching groves, and the comfortable mansion with all the adornments of taste and elegance.

"Bosom'd high in tufted trees;
Where, perhaps, some beauty lies,
The cynosure of neighboring eyes."

Such houses as these are the glory of the land, and they develop and foster a sacred influence which is a savor of stability to the national character, and leave a lasting impression for good both on the bodies and souls of those who are brought under the quiet yet powerful sway of the charms of cultivated verdure.

WOE TO HIM who smiles not over a cradle, and weeps not over a tomb.

Evergreen Hedges.

BY WALTER ELDER.

Evergreen hedges should form inclosures to all the various departments of ornamental gardening where they will thrive. To put up *dead sticks* or *cold iron* as fences to pleasure grounds and gardens, without linings of evergreens, is at war with good taste. It looks like setting up the dead to watch over the living. Notwithstanding the many wise suggestions written and spoken of the beauty that evergreen hedges impart to ornamental gardening, and the best modes of culture thereof, they are not yet so general as they ought to be. They should be universally used as inclosures. We have numerous species and varieties of evergreens that are well adapted for making good hedges—the many arbor vitæ, biotas, junipers, hemlock, yews, boxwoods, Norway fir, etc., some of which will thrive upon almost every kind of soil that is dry, or not in marshes. Where such spots occur, they may be set with osiers, to continue an unbroken live hedge. For *parks*, the Norway fir is one of the best to make a strong and thick outside hedge, and for divisions and suburban gardens arbor vitæ, hemlock, biota, juniper, tree box, yew, etc., are well adapted and give a pleasing effect. For parterres and small divisions, the dwarf boxwoods, dwarf arbor vitæ, and many other dwarfs are suitable. Every department of ornamental gardening is a *picture;* and the fences or enclosures are the *frameworks*, which either add beauty to the picture or destroy its beauty. Evergreen hedges add richness and beauty to the grounds and all the various kinds of plants thereon, as ornamental frames of precious woods finely polished, and others richly gilded, give greater graces to the picture. The cost of evergreen hedges, including the price of plants and setting them out, is about twenty-five cents per foot for tree boxwood, yew, Siberian arbor vitæ, etc., twenty inches high; and for American arbor vitæ, hemlock, Norway fir, Chinese biota, etc., twenty inches high, is about fifty cents per yard; the after-care, the three first years, in cutting up weeds about them, is about the same cost as a row of Indian corn of the same length.

Besides the beauties of evergreen hedges, their shelter is of great value in breaking off the low currents of cold air in winter which prove so destructive to the stems of many species of plants, which by their girt and density can not yield to sudden contractions by cold and burst open; or in other words, the compression of air in their cells becomes so great by sudden and severe cold as to cause explosion, just as the compression of air by fire and gunpowder rends rocks asunder. The branches being higher are not so injured by low cold currents, and being smaller and less dense, they give way to compression more readily and remain uninjured when the stems are rent. On the contrary, they are more exposed and suffer more severely from spontaneous evaporation, and are often killed by that when the branches remain sound. So as evergreen hedges save the *stems*, belts of trees protect the *branches* by checking the force of spontaneous evaporation.

It is a moderate estimation to say that evergreen hedges and belts of trees are worth ten times their cost in these respects. All horticultural improvers, for these reasons, should make fences of evergreen hedges universal, and the *dead sticks* and *cold iron* will be useful upon the railroads, etc.

From the first of April to the first of June, north of Virginia, is the best time to plant out evergreen hedges, and from the middle of September to the first of November in the autumn is a favorable time.—*The Horticulturist.*

Our native Holly and the Yeopon make better hedges for the South than any of above plants. The Enonymous also makes a beautiful ornamental hedge.

Culture of the Cranberry.

BY F. TROWBRIDGE, MILFORD, CT.

As the raising of cranberries is receiving more attention from those who are interested in their culture, a few facts in regard to their growth, culture, etc., will be of service to all who wish to raise them for their own use or market. Success in raising cranberries is owing entirely to thorough preparation of the ground and subsequent culture.

THE SOIL BEST ADAPTED is low, moist land, suitably drained, so that the water will be twelve or eighteen inches under the surface.

As the plant draws its nourishment from air and water, it is of no consequence how poor the soil may be. Light soil, or that destitute of organic matter, is better for their growth; hence, if the ground is covered with much bog or peat, it would be of great service to remove the top of the ground to a compost heap, and cover the remaining soil with sand to the depth of three to five inches.

The sand tends to prevent the growth of weeds, wild grass, etc.; is easier cultivated, and keeps the ground loose around the plants.

If planted directly on muck or rich soil, they are apt to make too rank a growth, sometimes ten or twelve feet in length, and cover the ground over with a mat three or four inches thick; and as the fruit grows on the ends of the shoots, the rank growth throws out but few buds; but if sanded over, the shoots are of short growth, the plants become rooted, and throw out stronger fruit-buds.

They will grow on moderately damp soil, that can be ploughed or cultivated, or in garden soil not too dry, and produce a fair crop on such land; but will not do well on dry sand or clay. Where the soil is partially dry, they can sometimes be covered with tan, saw-dust, or any thing that retains moisture, spread on the top of the ground; they also grow well on the borders of streams and ditches.

OVERFLOWING is desirable, and I might say it is almost indispensable to do this late in the fall. It is non-essential as to the depth of water over them. It can be let off again from the 1st to the 10th of May. If it can be so done, it is desirable to have the flow so regulated that it can be let off or on in the course of a few hours; so that, in case of drought or attack of the worm, it can be let on for a short time; it should be used also in the fall while gathering the fruit, for a frost may seriously injure it for the market. In prospect of any danger, the water can be let on until it is past; or if it is desirable to keep the fruit over the winter, the berries can be left on the vines until spring

when they will be as fresh as if gathered in the fall.

THE VARIETIES.—There are three varieties—the cherry, bugle, and bell—generally cultivated. The large round *cherry* is a late, not prolific bearer, and does best on quite damp soil. The *bugle* is quite handsome, not as late as the cherry, and not as prolific as the *bell*, which is the most generally planted. It is early and prolific, and is the kind usually sold as the Cape Cod cranberries. It is also the kind sold by some dealers as upland; but there are none strictly so.

PLANTING AND CULTURE.—When the ground is well prepared, lay it out as you would for planting cabbage, strawberry, or other plants, using a pointed stick or dibble to make a hole four or five inches deep, in which you place the plant, press the dirt around it, and the root and stem will soon start to grow. The remainder of the vines may be layered in the ground, leaving the shoots or stems above. The vines covered will take root and much sooner cover the ground. Another plan, adopted by many, is to take the vines up without roots, often six or eight feet in length, which they cut up and sow in drills, or lay the vine down and cover with dirt. In this way it will take from twelve to fourteen barrels of vines, costing $4 or $5 per barrel, to the acre. The reason for this course is, that where the vines are grown on rich muck or soil, they do not make roots, but all mat together, and the above is the only way they can be planted out; but where the ground is sanded, they grow more upright short vines with roots. These are best to plant out, are packed close for transportation, and the only kind that can be forwarded by mail. They are tied in bundles of 100 each. Ten thousand can be packed in a barrel, sufficient to plant an acre, two feet apart each way; but if the vine above ground is layered as proposed above, the two feet between each plant will be filled at once. Ten thousand plants will cost only $25, and much less for transportation. If planted this distance apart, they can be cultivated with a horse hoe or cultivator to keep out the grass and weeds. After two or three years' cultivation they will take care of themselves. If wanted in small patches or in gardens, they can be set a foot apart, and will cover the ground much sooner. They can be planted out at almost any season of the year—when the ground is not frozen, in the fall from September, at the North, until the ground freezes, or in the spring until July. At the South and West, if possible, they should be planted from October to January or February. If received too late for planting, the roots can be covered with dirt in a box and placed in a cellar, until they can be planted out. Where there is no overflow, I am satisfied they can be planted out in early spring until July, as well as fall.

Every family can have their garden patch, and in dryish soil, grass, meadow muck, tan, or sawdust around the plant will be beneficial to retain moisture. They are highly ornamental in pots, the fruit hanging on the plant until the blossom appears for the next crop. They often bear a few berries the first year, and increase every year, coming into perfect bearing from five to eight years, averaging 100 to 150 bushels per acre—sometimes yielding as high as 300 bushels.

A point worthy of notice is, that cultivated fruit is less likely to be affected by drought than wild fruit.—*The Horticulturist.*

THE Commissioner of Agriculture, Hon. Horace Capron, has completed arrangements for exchanges of cereals, rare seeds, and medicinal and other plants, with various institutions and several governments of different divisions of the globe. The arrangements include the governments of Austria, Prussia, China, Japan, Guatemala, and British Honduras; the botanical gardens of Melbourne, in Australia, and of Kew, in England; the India Museum, in London, and Cape of Good Hope Agricultural societies. The hearty co-operation of scientific men representing these governments and institutions has been secured.—*Mass. Ploughman.*

AT A trial on the Pennsylvania Experimental farm, Collins' cast-steel plow No. 12, weighing sixty pounds, showed a draft of 275 pounds. Most plows offer a resistance of between 300 and 400 pounds.

The Poultry Yard.

Hamburg Fowls.

There are several varieties of the family of Hamburg fowls, such as the Silver and Golden Penciled, Silver and Golden Spangled, Silver and Golden Pheasants, Coral Creole, Bolton Bays, Bolton Grays, &c. They are called Creole from the intermixture of black and white; Coral, because the numerous points of the polished, bright scarlet rose comb bear no distant resemblance to grains of red coral; Bolton Grays, from their being extensively cultivated in and about Bolton, a town of that name in England. All the Hamburg fowls, though scarcely of medium size, are plump, compact, and beautifully marked, and this, added to their great reputation as layers, should commend them as general favorites. Their Eggs are of medium size; they are rather noted for long continued than rapid layers. They are active, noisy, and impatient of confinement; great foragers, though great consumers of grain; and when full liberty and a good range are afforded, they are undoubtedly a most profitable fowl. Some consider them delicate in constitution, but this can be obviated in a great measure, by a little extra care when young, which will be amply repaid in the increased size of the fowls when full grown. There has been a great deal said by some about this class of birds not being winter layers. When this is the case, there must be bad management somewhere on the part of the owner.—*Rural Gentleman.*

Diarrhœa in Fowls.—The causes are, a scanty supply of grain, which necessitates an excess of green food, or an unwholesome dietary of any description, are the usual causes of this complaint. The treatment is simple: five grains of powdered chalk, the same quantity of rhubarb, and three of cayenne pepper, may be administered; and if relaxation is not speedily checked, a grain of opium and one of powdered ipecacuanha may be given in five or six hours.

The Proper Crosses for Poultry.

It is universally admitted that a continued system of breeding in-and-in, in the horse, cow, sheep, or hog is sure to produce deterioration. Not only is there a decrease of size, but tenderness of constitution and increased liability to disease.

One of our subscribers was recently telling us of the care he took of his poultry in this particular, not only every season to have a change of roosters, but also in selecting his own stock for keeping over the year; and in selling pairs always to have them "not akin" He informed us that, while his neighbors had among their poultry roup, gapes, cholera, and other chicken diseases, his own flock was, and had been entirely free from them. He considered this to be the cause, and there certainly can be no reason why the same objections to in-and-in-breeding should not operate, as with other stock.

We apprehend, in selling poultry, very few farmers take pains to pair them not akin—and, indeed, there is obvious difficulty in doing so, unless more system and method is introduced into the poultry yard, and more divisions made than usual. We have occasionally purchased fowls from a party having a small enclosure, and who feeds high, retaining year after year the same stock. These are large and fine; but we had them, without any previous warning, to drop over suddenly, we presume from something like apoplexy.

The crossing of distinct breeds, making what farmers value as the barn-yard fowl, more hardy and better layers than some of the pure breeds, may operate in this way. It is a common remark with those who sell eggs and get their profit from them more than selling chickens, that they get more eggs from mixture of breeds.

It may be well for poultry breeders to attend to this more than they do.—*Practical Farmer.*

If you want your hens to lay well give them oat meal pudding. For fattening, corn meal.

Fowl's Eating each Other's Plumage.

In answer to a correspondent who writes to complain that her fowls eat each other's plumage, the editor of the Agricultural Gazette says, that many a promising sale, many a silver cup reckoned on with certainty, has been postponed *sine die* because indulging in a vitiated appetite. The birds, especially the Spanish and Houdans, have eaten each other's plumage. Before prescribing a remedy, we must try and ascertain the cause. If the fowls are kept on a brick or boarded floor, he advises its removal and the substitution of gravel or chalk mixture. If the birds are kept in confinement they, at this season, require a very limited and varied diet, and in all their soft food a quantity of flour of sulphur should be mixed.

It sometimes happens that one particular bird is the culprit; if such be the case, it should be killed. A bird that is naked or bare in any part, should at once be withdrawn from the company of others, the stumps of the feathers pulled out, and the parts washed with warm water and anointed with spermaceti ointment. All fowls and pheasants will pick at bare flesh, and when the skin is broken, they will peck it and eat it to the bone. A poultry breeder recommends the application of a solution of bitter aloes to the feathers of the birds, and says he has never known it to fail as a preventive of the vicious habit of feather-eating. Whatever is the cause, it is certain that the complaints of feather-stripping are double the average, and the difficulty of the cure is manifest. The ingenuity and experience of all poultry fanciers will be brought to bear on it with, it is to hoped, satisfactory results. — *Western Rural.*

A Constant Supply of Eggs.—A neighbor of ours says that hog's lard is the best thing he can find to mix with the dough he gives to his hens. He says that one cut of this fat as large at a walnut, will set a hen to laying immediately after she has been broken up from setting, and that by feeding them the fat occasionally his hens continue to lay through the winter.—*Exchange.*

Correspondence.

[For the Reconstructed Farmer.]

Halifax Co., N. C., June 10, 1869.

Messrs. Editors: I have received the first number of your "Reconstructed Farmer." I like it all exceedingly—with the exception, however, of the title "*Reconstructed.*" The word suggests oppression, Freedmen's Bureaus, Northern tyranny and intolerance; dirty native scallywags, and mean Yankee carpetbaggers; negro legislatures and colored Justices of the Peace; civil rights bills, secret committees, military commissions, 14th and 15th amendments, negro suffrage, negro equality, sore-head Sumner, cock-eyed thief Butler, *et id omna genus.* No! I do not like reconstructed—so-called. It savours too much of defeat, disaster, shame, degradation, poverty and oppression. Call it "The Revolutionized Farmer," or "The Progressive Farmer," "The Amended Southern Farmer," or some other name which your taste and wisdom will suggest, and which will fit us better. But, indeed, I am very glad to see this enterprise started in our eastern section of North Carolina, which has long wanted a medium of this sort as an exponent of her agricultural and economical wealth, position and resources. It was to be expected that Edgecombe, the most enterprising, improving, united and sagacious (in a farming sense) of all the eastern counties, would have taken the lead in such a matter; and glad am I that the undertaking is in the hands of two such practical, sensible and enlightened farmers and gentlemen, with the Horticultural Department presided over by the skillful, intelligent and thorough horticulturist, the Rev. Dr. Cheshire. Lead on, Messrs. Editors, and may you induce the other counties of eastern North Carolina to follow; and whilst *they* profit by your instruction and example, may *you* reap a rich reward in paying subscribers and able practical contributors.

The news from section—no, from this township, (Caledonia), another off-shoot of reconstruction—is meagre. Every one is busy "chopping cotton" to "a stand," and plowing cotton and corn. The "stand"

is generally pretty good, but much of it young and late, on account of the cold spring and heavy rains which made it necessary for farmers to replant. Corn is generally a good stand and looks well; and there is plenty of it put in for the next year's support, and some to spare for sister Edgecombe, should she make too much cotton and not corn enough, (as will sometimes happen.)

Hogs are very scarce, but I think their number is inereasing slowly, as the application of the law to the pork-loving and hog-stealing freedmen has made them a little more particular about hog property.

The freedmen (so-called) are generally working well, some for a share of the crop, some on wages. As far as my observation has extended, they have worked and are working better this year than since "them surrembusras," (as an old negro of mine calls "the surrender")—an epoch from which we all date. They are in great demand for chopping out cotton, and some gentlemen in our township who have plenty of money and plenty of faith in the future of cotton, and probably backward and grassy crops, are giving as much as 75 cents and $1 per day for a hand. I believe in our township most of the contracts are made on what is called the "share system"—in my judgment a ruinous one to the interests of the country and its labor. But on this subject I may at some future day trouble you with a paper.

We have not much wheat in our township this year; what there is promises a good yield. The size of the crops do not warrant the individual use of reapers, &c., and we have not yet got to the co-operative system. Mr. R. H. Smith, the Messrs. Tillery, and probably Gen. Clark, are the only persons who have them; they expect, I believe, to cut their fine crops of wheat next week.

We have numerous "Sulky Plows" amongst us, and there is some talk of the Scotland Neck Club having a trial shortly in the neighborhood of Scotland Neck, which, by the way, ought now to be called Caledonia, as being more classic and euphonious. When they do, I hope some of our Edgecombe friends will bring their machines and compete for the supremacy and a good dinner—no prizes awarded; we are too poor, being but just *reconstructed.*

This matter of farming implements and labor-saving machinery is of vast importance to the amended or reconstructed farmer, dependent upon free labor, and I trust you will give it special, impartial and continued attention. But my letter is growing too long—so success, and farewell. CALEDONIA.

Analysis of the Pea.

The following analysis of the Field or Cow Pea is highly interesting to the farmars of this section. We shall be pleased to publish the analysis of other grains by Dr. Buie, from time to time.—EDS. FARMER.

WILMINGTON, N. C., June, 1869.

Messrs. Thigpen & Dancy.

GENTS—Enclosed you will find the analysis of the Cow Pea. 1,000 grains of fresh, clean peas were selected. The following is the result:

Volatile and combustible matter	980 grs.
Ash	20 grs.
The 20 grs. of Ash give—	
Phosphates of Lime	15 grs.
Sulphates, Chlorates, Silicates, Potash, Soda, &c.	5 grs.
	20 grs.

You can easily see the real cause why the Cow Pea is so highly valued as a fertilizer when ploughed under entire. The vine gives a high per cent. of Phosphates, as well as the fruit.

Yours, truly,

D. M. BUIE.

A DELICIOUS DISH OF APPLES.—Take two pounds of apples, pare and core them, slice them into a pan; add one pound of loaf sugar, the juice of three lemons, and the grated rind of one. Let these boil about two hours. Turn it into a mould, and serve it with thick custard of cream.

THE Early Rose sprang from seeds in a potato ball. From the seeds of that one ball seven kinds of potatoes have been raised; and, what is stranger than all, each of the seven varieties is excellent in its way.

Senator Sprague on the Cotton Tax and the Condition of the Country.

Senator Sprague delivered an address before the Memphis Commercial Convention, from which we take the following extract:

I stated in my place in Congress, when the tax was on cotton, that if it was not taken off, it would drive Sea Island cotton out of the market entirely in a couple of years. I tell you, my Southern friends, that if you don't come to the rescue soon, cotton will cease to be a profitable article of product. England is doubling her product of cotton in her Indian possessions, and with France is co-operating with the King of Egypt to raise a large supply of cotton in that country, which is said to be a better staple than the best ever sold in the New Orleans market. In Brazil they occupy the same position, so that we are to have many competitors in the raising of cotton. We must, therefore, increase the products of our lands so as to successfully compete with these countries. The position is alarming, but if I shall succeed in urging you to take some steps in this important matter, I will be repaid for my coming to Memphis. The country at the present time is like Spain before its fall. It had been a powerful nation, and had complete power of all the West Indies, but where is she now? Let those who read history answer the question. They will hear me out. This may also become the condition of the United States, if you do not exercise more self-dependence. You imagine that by your own strength of arm you may and can maintain the situation and avert all this, but I tell you there is a power you cannot control unless you bring a power of sufficient force and strength against it, and that is the money capital which is working night and day. It is this that has made England and France powerful. Before England controlled this vast capital power she was torn nearly asunder by dissensions. Disturbances were frequent, and she was always in a state of revolution. The monopoly was broken up, and the money is now used for the furtherance of industrial objects. Through this means England has been enabled to control one-third of the trade of the globe. In England anarchy is but a name, and the House of Lords, although hereditary, is also but a name, and the same may be said of the nobility of the country. The people, from the time I have referred to, have prospered, and the want of it gave us our civil war. If you had had the power I have alluded to, you could hold slavery, but the money power would have been in the masses. They would have been found mutually aiding each other, while the black man would have been held in a proper subordination. What, however, has been the consequence I need not tell you—you all know. We took our law from the fatherlands, but in doing so we turned the money leaf down. Those of you who have read history know that I am telling you what is now a portion of history. I did not intend to make a speech to you when I arose. It was only my intention to thank you for the very cordial reception you have given me, and to express the hope that the greatest harmony would characterize all your deliberations. I will say again that the money capital ought to be used for promoting the best interests of the country; for carrying on the trade and building up the country instead of keeping it concentrated and centralized. There is danger to our financial institutions from this source, and it is well known to me that those capitalists who control the money are anxious to get a stronger government than they imagine the present one to be, as they wish to protect themselves and their ill-gotten gains from the people whom they have crushed. We have even now in New York a paper called the *Imperialist*, established for the purpose of openly arguing in favor of an Empire. They wish to strengthen their ill-gotten power and control, as they are now doing, business, society and the government, whom they have as completely under subjection as ever a domestic negro was in a white family previous to the war.

Sulphate of Ammonia is largely used in England as a fertilizer on crops of wheat and grass, and with good results. The demand for it for this purpose is growing rapidly. It has also been found very profitable when applied to sugar cane and beet roots.

Why Cut Feed is Best.

Among our farmers generally too little attention is given to the method of feeding their animals. Although it may be a little more trouble, we have found that it pays us in the long run. We know that there are many who will disagree with us, yet, upon a little investigation into the truth in this question and its natural effects upon the animals fed, it cannot but seem very apparent.

Cutting fodder does not add any more nutriment, we admit; but it changes its mechanical condition and enables stock to consume it in less time, and thus have more time for rest and digestion.

It is a well-known fact, admitted by all, that a man who eats regularly—say three times a day—is far more healthy than he who is constantly eating; for by so doing the digestive organs are required to act three times daily, and then they rest; whereas, if kept in a constant state of action, and without rest, produces weakness, which, if continued in, will ultimately throw one into dyspepsia.

The digestive organs require as much rest as the body. Although every one would think it preposterous if any one were to go without sleep for days and weeks, yet we seem to have no regard for our digestive organs. The same facts hold good for our domestic animals, for are they not classed among the mammalian order of the animal kingdom the same as man, and their composition relatively the same? Therefore, should we not respect them as our own organism? Especially is this a valuable consideration for hard-horses.

Again, cut hay or straw, slightly moistened and springled with ground grain is much more palatable, and preferred by stock to unmixed food, and tends to maintain a more vigorous appetite than when confined to unprepared food.

Again, it is the faculty of mixing food right that pleases the palate, and though there is no more nutriment in it, opportunity is given to get more from it, and a less amount is passed off in excrement.

A dish of potatoes well seasoned with butter, salt, and pepper, would not be turned from by the most fastidious; but if a person were required to eat each separately it would be turned from in disgust.

The question of economy in this matter of course depends upon the value of labor and of food in different localities, and under various circumstances. But we have found on our farm that it is profitable, notwithstanding the seeming high price of labor.

The superintendents of several city horse railroads in cities where horses are very much worked have told us that they were obliged to give cut food to keep their horses in good order.

Nothing can be gained, however, by preparing food that was not good before. Many think that by adding meal to cut straw, butts of cornstalk, cabbages, and the like, and inducing their stock to eat it, that they have made a gain; but it is impossible for something to come out of nothing.

Wherever digestion can be helped, a point is gained; and if a less amount of food cut will go further, another point is gained. If better digestion secures more nutriment from the food administered, and a less amount is wasted in excrement, a less amount of food will be required. Several of our neighbors will join us in the statement that nearly fifty per cent. is saved by preparing food; and if it could be steamed, it is still better.

We should like to hear the opinion of some of our readers, who undoubtedly have given the matter a thorough practical test.—*Stock Journal.*

Nail in the Foot.—To relieve from the terrible effects of running a nail in the foot of man or horse, take peach leaves, bruise them, apply to the wound, confine with a bandage. They cure as if by magic. Renew the application twice a day, if necessary, but one application usually does the work. I have cured both man and horse in a few hours, when they were apparently on the point of having the lock-jaw. This recipe, remembered and practiced, will save many valuable lives.

John Johnson, the father of upland tile draining in this country, lives to see within the State of New York 52 factories of tile drains.

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RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

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For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

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[From Cantor Lectures.]

Varieties of Food and their Nutritive Value.

After furnishing several tables, designed to set forth the chemical composition and the nutritive value of the chief articles of food that we eat here and in Europe, the lecturer proceeds to say that—

Primarily, all our foods are derived from the vegetable kingdom, for no animal has the physiological power of assimilating mineral elements and forming them into food. What we may yet do by means of chemical agencies in the laboratory is another question; but within our own bodies there is no faculty for such conversion. As I shall hereafter explain to you, our functions are of an opposite kind. We are destructive creatures, not constructive. It is our province to pull down what the vegetable has built up; to let loose the affinities which the plant has brought into bondage, and to restore to inanimate nature the matter and cosmical force which the growing plant had taken from her.

Foremost, therefore, among our foods are those which come at once from the vegetable kingdom; and of these the cereals are the most important, as wheat, barley, oats, rye, maize or Indian corn, rice, millet or durra, and Guinea corn.

Wheat.—Different species of this grain are cultivated, but the most common in this country is *Triticum vulgare*, of which there is a summer and winter variety.

The grain varies a good deal in composition according to season, climate, and soil; but, as a rule, the wheat of Southern climates and warm seasons is richer in gluten, and of harder texture, than that of colder climes. They are then called stronger grains, although the latter, from their being softer and kinder, give a larger proportion of flour. Some of the hardest varieties of wheat, as rivets, are used to strengthen the flour of new grain, which is always unmanageable, and to improve that of bad seasons and of damaged quality.

The structure of the grain is like that of all the cereals; there is an outer siliceous and woody covering which is altogether valueless as food; then there is a layer of rich, nitrogenous matter containing a digestive body called cerealine, and within that is the flour, which forms the great bulk of the seed.

When ground whole, it forms brown meal, which is rarely used in England at the present time, although it was the common food of our forefathers, and even now is much employed in Westphalia to make the dark-colored bread called pumper-nickel. It contains from 5 to 12 per cent. of indigestible matter, in the form of bran, the removal of which, according to Liebig, is only a refinement of luxury.

The practice at the present time is to bolt or sift the ground meal through sieves, or silks, of different degrees of fineness, and thus to remove the coarser

bran. The products have different names in different places, and have also different values; but generally 100 lbs. of wheat will yield from 78 to 80 parts of good serviceable flour. The other products are about 2 parts of specks, or tails, or tippings; from 2 to 3 parts of sharps; about 3 of fine pollard; from 3.5 to 6 of coarse pollard; and from 4 to 10 of bran. The relative wholesale values of these are about as follows:—

Vegetable Foods.	lbs. per bus.	Price per bus. s.	d.	Price per 20 pounds. s.	d.
Fine Flour	56	10	0	3	7
Seconds ditto	56	7	9	2	9
Sharps	26	2	0	1	6
Fine pollards	18	1	0	1	1
Coarse ditto	14	0	10	1	2
Bran	12	0	9	1	4

Seconds flour is practically the best for domestic use; and of this there should be at least 80 per cent. obtained from the grain. Attempts have often been made to increase the produce; for as the bran contains a good deal of nitrogenous matter, and is, moreover, rich in fat and saline substances, it has been thought wasteful to remove it; but the experimental researches of Poggiale, the learned professor at Val-de-Grace, have shown that at least 50 per cent. of the bran is perfectly indigestible, and may be passed successively through the bodies of four or five animals without undergoing change. It, moreover, acts as an irritant, and, by hurrying the food through the alimentary canal, is very likely to cause waste. Those who labor hard, as railway navigators, invariably choose the whitest bread for food, believing that it is not only more digestible, but it is stronger, and will enable them to do more work. Without doubt, however, there is room for improvement in the treatment of flour, and in the complete utilization of its several constituents. M. Mege Mouries has invented a process whereby the outer skin only of the wheat may be removed, and from 86 to 88 per cent. of flour realized. The process was examined in 1857, and reported very favorably of by Dumas, Pelouze, Payen, Peligot, and Chevreul, but I am not aware that it has come into use.

M Mege Mouries also directed attention to the fact that the bran contains a portion of very soluble nitrogenous matter, cerealine, which is of the nature of diastase, and has the property of dissolving starch. This, no donbt, might be utilized by treating bran with warm water, and then using the water in the manufacture of bread.

The nutritive value of wheat is shown in Tables No. 3 and No. 4; and although the average amount of gluten is there set down at about 11 per cent. it ranges from 8 to 15 per cent.—the largest quantity being found in the wheaten flour of India, Egypt, South America and the South of Europe.

It appears, too, that the quantity of gluten, as represented by nitrogen, increases with the coarseness of the flour, and so also does the amount of mineral matter.

Table V.

Percentage amounts of Nitrogen and Mineral Matter in the different Products of the Mill.

	Nitrogen.	Min'l matter.
Fine flour	1.70	0.71
Tails	1.86	0.99
Fine sharps	2.21	1.89
Coarse ditto	2.58	3.80
Fine pollard	2.44	5.50
Coarse ditto	2.42	6.50
Bran	2.39	7.00
Average in whole grain	1.82	1.62

The starch and sugar amount to about 70.5 per cent., and the fat to 1.7; so that the carbonaceous is to the nitrogenous as 6.7 to 1, which is a good proportion.

The tests for a good flour are its sweetness and freedom from acidity or musty flavor; and its nutritive value, as far as gluten is concerned, is estimated by the process of Beccaria, who discovered gluten in wheat more than a century ago. A given weight of flour (say 500 grains) is made into a stiff dough, and is carefully washed by tender manipulations under a small stream of water. The gluten remains, and when baked it expands into a clean-looking ball, which should weigh, when theroughly dried, about 54 grains.

Of all the preparations of flour, bread is the most important. I shall hereafter describe the process of making it, but I may here remark that it should not contain more than from 36 to 38 per cent. of water, and the other constituents, excepting salt, should be the same as of good flour.

In practice, 100 lbs of flour will make from 133 to 137 lbs. of bread, a good average being 134; so that a sack of flour of 286 lbs. should yield 95 four-pound loaves. The art of the baker, however, is to increase this quantity, and he does it by hardening the gluten through the agency of a little alum, or by means of a gummy mess of boiled rice, 3 or 4 lbs. of which will, when boiled for two or three hours in as many gallons of water, make a sack of flour yield 100 four-pound loaves. But the bread is dropsical, and gets soft and sodden at the base where it stands. A good loaf should have the following characters:

Kindness of structure—that is, not chaffy, or flaky, or crummy, or sodden; and sweetness to the palate and to the smell.

Wheaten bread is best eaten on the day after it is baked, for new bread is difficult of mastication, and still more difficult of digestion, because of its gummy nature. When it becomes stale, it does not really get much drier, but it undergoes a molecular change, which may be restored by heating the bread in a closed vessel to a temperature of 212°.

Wheaten bread is preferred to all other varieties of bread, because of its sweetness, and because it may be eaten alone. The nutritive constituents of it are in the same proportion as in wheat—namely, as 1 to 6.5, and a little more than 2 lbs. of bread will supply the requirements of the system; although, as I shall hereafter explain, it cannot be used alone without loss of health and strength.

Diseases of Hogs, etc.

Lebanon, Kentucky.—Rev. Thomas C. Clelland thus gives his experience: Millions of dollars are lost to this country annually by what is called "hog cholera." Nine-tenths of this amount could as well be saved as lost. The following facts are the result of long experience and close observation, carefully compared with the experience of our most practical and successful farmers. I readily admit that there are some diseases that swine flesh "is heir to," whose surest if not only remedy is in prevention; and sometimes even this is impossible.

Pleuro-pneumonia is induced in hogs by sleeping in the dust and wet straw, and by close confinement, followed by sudden exposure. A friend lost his stock hogs by shutting them out from their warm beds in March. Let their beds be warm and changed frequently during the winter. If this disease makes its appearance, the best thing to do is to scatter them as widely apart over the farm as possible. Some persons have kept their sick hogs on a dry lot, with not a drop of water, with apparently good effect. If you are willing to "count the cost," call in your family physician and tell him to prescribe just as he would were you the patient. Make the prescription in the form of a pill, turn the patient upon his back and drop it in his mouth and close the jaws an instant, until the pill is swallowed. I have known many instances of a speedy cure where all hope was lost. I believe that it remains for science to disclose that this, and all other similar diseases, either in man or beast, are the result of animalcule or cholera fungi, invisible to the naked eye.

Worms and lice.—If other diseases slay their thousands, these slay their tens of thousands. We clip the following from a public journal:

"The writer having for several years sustained a heavy loss by hog cholera, has applied his mind to discover the cause and cure of the same, and now thinks he has gained the victory over the great enemy. By examining the carcasses after death I find they contain an incredible number of worms, and also of lice on the body. After making this discovery I experimented as to how the lice and worms could be exterminated in time to prevent an attack of cholera. The lice were easy to drive with coal oil; to kill the worms I steeped the herb "Jerusalem oak" in hot water until the liquor was very strong. I then mixed corn meal and fed the hogs while in health, which killed the worm before the cholera set up in the system."

No doubt worms and lice, nine times out of ten, are the cause of the hog cholera. But I object to the use of the remedy. Never use coal oil. It will "drive the lice," but will not kill the nits; besides, it is very injurious to the skin, and

often kills very young pigs. Soap-suds is just as effective, and far more healthy. Copperas is a far better anti-worm medicine than "Jerusalem oak," besides being a fine tonic and appetizer. This, mixed with ashes, and salt—another excellent vermifuge—will prevent worms and give tone to the system. The best remedy for lice is grease and tar in equal parts stewed together, mixed with a very strong decoction of common tobacco. One application of this will last six months; while warm apply with the hand or a mop tied to a rod. Change their beds, and if you have any old tobacco stems let your hogs sleep on them. Lice will kill hogs that are perfectly fat, by getting into their ears, eating into their eyes, and very often prevent hogs from thriving, where they do not kill them outright. The owner wonders why his hogs do not fatten. If you see nits shining thick about the neck and flanks, and great lice crawling all over the body, apply the above remedy; it save you a barrel of corn to each hog or increase the amount of weight equal to its value. Last year the writer had a sow with seven pigs; I weaned her pigs; all but one died with lice, and that one I saved by washing it in soap-suds. The sow did not gain a pound in a week; she was restless and wild until I applied grease and tobacco, when she became tame and began to fatten finely. Two years since a friend told me he was losing all his hogs with the cholera; two or three died each day. I asked to see them; they stood with their heads down, eyes sore, heads swelled, &c. As they were too weak for the application of tobacco, I advised a bath in strong, warm soap-suds. This would kill the present crop of lice. He saved every one.

The model farmer of our county told me he had lost several hogs. He found that, in cutting in two the smaller bowels, sometimes he would kill five or six worms. Another friend was losing his little pigs; he found their ears full of lice; otherwise, perfectly fat and healthy. The most successful breeder of swine in this State gave me the result of sixty years' experience:

I prefer my pigs should come in the middle of February. I prepare a long row of square rail pens, one to each sow, fronting south, just high enough for her to stand under; the eve of her shed to reach the ground on the north side, to keep off cold winds. I fill the bottom of the pen with good dry straw, and train each sow to wait before her own door for her regular rations. I never let my sows with young pigs run on green clover, rye, or oats. Wheat or blue grass will not hurt them, but the native woods are preferable to either; clover, &c., will produce worms. In the spring, when I mark them, I prepare a tub of strong, warm, soap-suds, into which I put a quart of grease and a quart of tar, and a decoction of two pounds of tobacco. Into this I immerse the shoats; they are never troubled with lice afterwards. To keep off worms I feed once a week on ashes, (say one gallon to 50 hogs,) with one pint of salt, mixed well with a quarter pound of copperas. My hogs never have the cholera, though I send five or six hundred to market annually. In feeding I never surfeit my hogs. I give them just what they can eat, but none to waste. I prefer to see them rise up with avidity to receive their daily meals."

In conclusion permit me to say that these facts and suggestions have been collected and prepared with great care, and I know they are worthy of consideration by every one who would be a successful breeder of swine. If some trouble and pains are involved in the application of the above it will repay an hundred, and, in many instances, a thousand fold.—*Monthly Report Dep't of Agr.*

The Cow Pea as a Fertilizer for Wheat.

We have long been satisfied, from actual experiment, that the common cow pea of the Southern States, when properly managed, affords the best and, at the same time, the cheapest medium for the restoration of our exhausted cotton-fields. Its effects have been as lasting and as marked upon the fertility of our soils as that of clover upon the worn and exhausted lands of Virginia and Maryland.

The main reason why the cow pea has not been heretofore extensively used as a fertilizer was owing to the fact that previous to emancipation our planters would not give up a sufficient portion of their lands to await the rather slow effects of

this valuable fertilizer. Now, however, when every planter has a large proportion of his poor lands lying idle, there is no excuse why the pea should not be set in every field not absolutely necessary for corn or cotton.

Now is the best time to plant the pea, and we desire to give our agricultural friends the result of a careful experiment made by a farmer in Gwinnett county to encourage them to make similar efforts. Our Gwinnett planter had a piece of old exhausted land, twenty acres of which had been lying in broom sage for a number of years. This he broke deep with a turn plow in the summer, and in the succeeding fall put down in wheat. The crop, carefully measured, was a little less than four bushels to the acre.

As soon as the wheat was cut he sowed peas at the rate of two bushels to the acre. Early in October the peas were turned under with a deep furrow, and a few weeks later wheat was sown and carefully harrowed in upon the pea sod. The yield from the crop was nine bushels to the acre, a little more than double the first year's crop.

The field was again sown in peas as soon as the wheat was harvested and turned under as before, and wheat sown upon the soil. The yield this year was seventeen and a half bushels.

The fourth year, with the same treatment, he made twenty-seven bushels, and this (the fifth year) the crop bids fair to make forty bushels. Nothing has been applied to the land as a fertilizer except the pea, and we find that in five years, with the cow pea alone, the production has been increased tenfold. This actual experiment speaks more for the pea than any argument which we could make.

We trust some of our planting friends will be induced to try the pea on the next crop of wheat and let us know the result of their experiment.—*Augusta Chronicle and Sentinel.*

THE United States produced twenty-five millions worth of cheese and a hundred millions of butter last year.

FARMERS are like fowls—neither can get full crops without industry.

Pigs in Summer.

Summer is the time to make pork; making it in winter is much like running a boat against wind and tide; it requires too much food to keep up the animal heat. If hogs have plenty of grass in summer, and about half the corn they will eat, they will fatten rapidly; and my belief is that three pounds of pork can be made of less grain in this way than one pound can be in cold weather with a hog in a close pen. The grass is cooling and loosening, and counteracts the feverish properties of the corn. Hogs will never melt in summer, however fat, if they can have access to water and mud to lie in. Mud is very bad for hogs in cool or cold weather. It absorbs too much animal heat. Milk is a very cooling drink, and almost indispensable to raising young pigs. But very little corn and no corn meal should be fed to young pigs before they are four months old. The effects of corn and raw corn meal on young pigs are these: The pigs at first will be costive; then they will scour. They will begin to rub against everything they can rub against, that will rub their hair off. Their skin will have a red and dry appearance. A dry, black scurf will begin to form on them; and the more of the corn and meal they eat, the poorer they will get. The best thing that can be done for a pig in this condition is to give him a thorough washing in warm water or sour milk; sour milk is best.

Coarse flour or middlings from rye or wheat, when made into a thin drinkable slop with milk, is the best food for young pigs, except bread and milk. Bread is very good for very young pigs because it is leavened. Food has to ferment before it will digest, and if fed to a young pig before fermented it will over-task the stomach and spoil him. Lettuce is good for young pigs. It will stop the scours in them. The middlings should be put with the milk at night, after the feeding has been done, and allowed to be in the milk through the night, never allowing the swill tub to get quite empty, always leaving a little in the bottom for yeast. The swill should never be permitted to get stale. Slop feed should be fed often, and never more fed at a time than will be eaten up at once. Slop feed will make larger

hogs than dry feed. After the pigs get to be three or four months old, their food can be made stronger; but a pig will not bear much stronger food until it begins to change from a pig into a hog, which will be known by his voice. In the West, where hogs are raised on a large scale, but one litter should be raised from a sow in a year. The fall litter will require too much care for the farmer. One litter can be got in April and another in September or October following, from one sow, but the spring pigs will have to be weaned from four to six weeks old, and fed on clear sour milk for two or three weeks after weaning, and fed often. New milk once a day will keep them from scouring. Sour milk is better than new milk. New milk will first make the pig costive, then scour him. It will curdle in his stomach, but sour milk will not. The late fall pigs should suck as long as they will, and the sows should be fed on warm slop feed, and fed often. The slop can be warmed by pouring hot water in the swill tub. A breeding sow should never be fed much dry corn. She will get foundered on it and spoiled.—*Amer. Stock Journal.*

Usefulness of Willows.

Farmers should have a patch of osier willows growing near the homestead, as they are exceedingly useful for many purposes. Baskets of various sizes are needed in the house, barn-yard and field, and when there is plenty of material they can be made within doors in winter, when farm work is not pressing. The *Salix viminalis*, or basket-willow, is best suited for this purpose. Of the purple willow, *Salix purpurea*, it has been said that "if there were but one ozier in existence, this would supply more of the wants of willow-workers than any other one." Willow withes are very useful in the garden, nursery, or pleasure-ground, as they supply an abundance of ties for fastening vines or trellises, tall-growing flowers to stakes, and also serve for bands for the nurserymen. The clear stems of two or three year old willows furnish poles for beans, etc., and when split make hoops for vessels of various kinds. The golden osier (*Salix vitellina*) is very ornamental, even when entirely denuded of foliage. It is also useful, for its young shoots make good ties, and its medium-sized branches and twigs furnish pea-brush, a thing that is not always at hand in some gardens.

Willows will grow in a great variety of soils, especially if moist, but not profitably in any unsuited to their habits.—Drained swamps afford fine sites for willow plantations. A deep, rich bottom of sandy loam that is occasionally overflowed, is very suitable for their growth. Any amount of overflowing, not in the growing season, does no damage, but increases the fertility. Richness of soil is important, great depth indispensable, and easy culture desirable and profitable.—*Ex.*

Improving Lands.—If your land is worn out, many chances to one it will improve it by deep-plowing—I mean till up to the beam. This may not benefit it for a year or two. But it will not be much worse than it was before, being worn out and non-paying. A little manure thrown over it—and if it is much it will not hurt it, will prepare the ground, raw as it is, for grass. The sun and the manure, in connection with the rains, and the frost previously—for the land should be plowed in the fall—will so ameliorate the top soil as to insure a good seeding and a fair crop. In a few years more, whether kept to grass or plowed, there will be an improvement for the better, and that decidedly, and it will be lasting, that is, it will have another run as it had before—and if underdrained and subsoiled, and thoroughly cultivated, will be better than ever before. This is the experience with us. We tried it on a hill of some eight acres. The soil was drift with considerable hay in it, not rich naturally, but producing something beyond expenses, &c. For the first few years, after the soil was inverted, there was no growth, the crops were a failure. After that they surpassed the original productiveness, and were more remunerative than before.—*Prairie Farmer.*

A number of peach growers about Milford and Dover, Del., have sold their peach crops for this year at from thirty to forty cents per basket, delivered at the railroad station.

From the Rural American.

How to make Good Farmers.

This subject has been often discussed. Various opinions have been offered, some of which are very good, others quite inferior. I propose to make a few suggestions for the benefit of the readers of the RURAL.

There are thousands of farmers in the world who seem to think nothing but physical strength is requisite to make good farmers. With such men farming is neither more nor less than simple coarse drudgery, and yet there is no human pursuit so intimately connected with every department of science. It is this erroneous and most pernicious impression which has degraded agricultural pursuits in the estimation of so many, and has driven thousands of intelligent and promising young men from their homes in the country to the cities and to ruin. When will farmers rise to the true dignity of their calling? A boy is apprenticed for years to enable him to acquire sufficient skill to make a coat, a shoe, or a hat, but farmers are supposed to be born such. We very seldom meet a man, whatever his earlier education may have been, who does not feel himself perfectly competent to manage a farm. It requires years of preparatory study to fit a young man for any of what are denominated the learned professions. To become a lawyer, a physician or a clergyman, he must devote four or five years in the colleges, passing over his books and listening to lectures. All this is well enough. In fact it is indispensably necessary; but anything in the shape of a human being, who has sufficient physical strength to enable him to hold a plane, wield a scythe, or harness a horse, is considered enough for a farmer. Why is this? Can it be supposed when rigidly considered, that such men, without mental culture, can make "the principles and discoveries of some of the most profound and complex of human sciences, bear upon the diversified and multitudinous practices of agriculture?" I would not be understood as supposing this applies to all farmers. Fortunately for our country, there are, among the cultivators of the soil, a very large number of very sensible and intelligent men who would honor any profession. My remarks are designed to have reference only to the too generally prevalent opinion that agricultural pursuits demand nought but broad shoulders and strong arms.

This error, I am glad to know, is now being rapidly dissipated. For this blessing, we owe a debt of gratitude to the teachings of agricultural journals, agricultural and horticultural societies, and to the influence of valuable agricultural books. The tillers of the earth are beginning to estimate, as they should, the immensely important position which is held by agriculture in its relation to all other human pursuits. Agricultural teaching is beginning to assume its proper place in our institutions of learning. Farmers are awakening to the fact that an intelligent mind is a far better director of a strong arm than a mind upon which the light of education has not shed its beneficent rays. They are beginning to appreciate the great importance of familiarizing themselves with the *science* of agriculture as well as with the mere art, for it *is* a science. They are beginning to realize the necessity of understanding the *principles* which underlie the science as well as the *practice*. These are encouraging truths. It gives bright hopes for the future of our country. It is to be hoped the day is not very far distant when all our farming interests will be greatly improved. We may yet possibly see the time when every department of the science will be sufficiently understood and the necessity of each being sufficiently studied to make all our farmers better acquainted with the business so that it may be conducted with infinitely more ease and success. Let the importance of respecting the science and make it a study, then, be encouraged. The good work has begun. By all means let it be pressed vigorously on. To every farmer I would urge the vast importance of making handsome outlays of their means in order to provide their children with the necessary books and means of instruction to store their minds with valuable agricultural information. If this course were pursued, farmers' sons would become intelligent agriculturalists and useful citizens.

FARMER.

Bottling Fruit.

* * * I have for many years been in the habit of using glass jars, but as you know of late years many have got to using tin cans. This is on account of cheapness. They cost less in their first cost, and it is also given out in their favor that they never break. But the fruit looks so pretty in the glass jars that I never liked to give them up, and though they are not now much in use among my neighbors and friends, I stick by them yet. The cracking part I have overcome. I do it in this way. It used to be customary, and is, for that matter, customary yet, to put the glasses into cold water, and gradually heat them up to near boiling point, when the heated fruit is put in and closed up. But with all my greatest care glasses often broke. Now I get a wet towel, double it four or five times, and set the jar on this while pouring in the warmed fruit. I adopted this plan all last season, and did not have one glasss to crack. I saw the hint in some newspaper, but cannot recollect where. It seemed so unreasonable to cool them, instead of warming them, that I was at first afraid to try it, and very reluctantly experimented with two. As they succeeded well, I did all that way last summer, and shall continue to do them this in the same way. This objection against my favorite glasses is thus entirely removed, and there remains nothing in favor of tin, but the first cost. I use many different patterns of jars, all of which have elastic bands around the stoppers, some tightened by screwing, others by a clasp. All this is soon done, and the bottles soon opened when wanted, which is an advantage over tin, for which cement has to be prepared, and which takes time to open—and then the superior cleanliness of the process in the jars, is, I think, much in their favor over tin. Mrs. C. E. M., in *Monthly Gardener.*

Pine Apples are being cultivated in the peninsula of Florida with the greatest success. They are larger than those grown in the West Indies, and fully equal to them in sweetness and flavor.

Mississippi expects a $40,000,000 cotton crop this season.

Comfort for Tea Drinkers.

In the life of most persons a period arrives when the stomach no longer digests enough of the ordinary elements of food to make up for the natural daily waste of the bodily substance. The size and weight of the body, therefore, begin to diminish more or less perceptibly. At this time tea comes in as a medicine to arrest the waste, to keep the body from falling away so fast, and thus to enable the less energetic powers of digestion still to supply as much as is needed to repair the wear and tear of the solid tissues. No wonder, therefore, that tea should be a favorite, on the one hand, with the poor, whose supply of substantial food is scanty, and on the other, with the aged and infirm, especially of the feebler sex, whose powers of digestion and whose bodily substance have begun to fail. Nor is it surprising that the aged female, who has barely enough of weekly income to buy what are called the common necessaries of life, should yet spend a portion of her small gains in purchasing her ounce of tea. She can live quite as well on less common food, when she takes her tea along with it; while she feels lighter, at the same time more cheerful, and fitter for her work, because of the indulgence. *Chemistry of Common Life.*

Beauty.—Let me see a female possessing the beauty of a meek and modest deportment; of an eye that outspeaks intelligence and purity within; of lips that speak no guile—let me see in her a kind and benevolent disposition, a heart that can sympathize with distress—and I will never ask for the beauty that dwells in "ruby lips," or "flowing tresses," or "snowy hands," or the other "rosy" *et ceteras*, upon which youthful poets and silly enthusiasts have harped for so many centuries. These fade when touched by the hand of time, but those ever-enduring qualities of the heart shall outlive his reign, and grow brighter and fresher as the ages of eternity roll away.

Crickets.—Dusting clothes with snuff and a little camphor, will banish all crickets and moths.

To Destroy Rats.

From an essay on "Mammalogy and Ornithology," by E. A. Samuels, of Boston, in the Agricultural Report of 1863, we extract the following on that pest so universally diffused through country and town, the rat:

Before dismissing the destructive family *Muridæ*, it will be proper perhaps to mention some of the methods that have been adopted on the farm for their destruction, or to prevent their ravages. Numerous traps have been devised, some of them ingenious and effective. Of these, the best I have seen—one for barns and granaries and another for the fields—are as follows: Place a barrel half full of water beneath a trap-door in the floor of buildings infested with these animals, so that the top of the barrel will be just on a level with the floor; around this scatter grain or meal at night, and by morning numbers will have fallen in and been drowned. In the fields and nurseries where they abound, a trap made on the favorite Scotch plan is very effective. Dig in the earth, at the beginning of cold weather, short trenches four feet wide at the bottom, and three feet wide at the top, and about four feet deep; the ends inclined at the same angle as the sides. The earth walls of these trenches after becoming frozen, are impassable to mice that have fallen in, as they will in great numbers. I am informed by a Scotch gardener, that he has killed upwards of *nine thousand* in one winter in this manner.

Different poisonous preparations have been used with effect on these vermin. The following are among the best: two ounces of carbonate of barytes mixed with one pound of suet or tallow; place portions of this within their holes and about their haunts. It is greedily eaten, produces great thirst, and death ensues after drinking. This is a very effective poison, as it is both tasteless and odorless. Mix one ounce of finely powdered arsenic and one ounce of lard, with meal, into a stiff dough; put it about the haunts of the rats; they will eat it greedily, and it makes them so thirsty that they will die near the water, of which they drink until they burst. Other effective poisons are composed as follows: make a paste of one ounce of flour, one-half gill of water, one drachm of phosphorus; or, two ounces of lard, half a drachm of phosphorus, and one ounce of flour; or, one ounce of flour, two ounces of powdered cheese-crumbs, and one-half a drachm of phosphorus; add to each of these mixtures, if convenient of access, a few drops of oil of rhodium. Mix into a paste or pills, and scatter about the fields and nurseries. Or, two ounces of finely powdered arsenic, two ounces of lard, ten drops of oil of rhodium, mix with flour or meal into a thick dough, and pills of it scattered about the orchards and nurseries.

Japan Clover.

Editor Farmers' Home Journal:

Dear Sir:—A recent trip to the western part of this State enables me to place at your disposal a specimen of Japan clover, and a few facts pertaining to its characteristics, locality, &c. I found that this plant was very generally scattered over all of the counties west of Salisbury, and was told that it was rapidly spreading in every direction; wherever it takes hold all other grasses surrender the ground, and it soon becomes entire master of the situation. It seems to care very little for soils, for I saw it growing luxuriently in many places that a glance convinced me were entirely devoid of substance, as for instance, in old roads that had been traveled fifty and sixty years and enclosed because a nearer road had been provided. In badly washed gullies, too, I witnessed it flourishing and healthy. Many farmers are planting it for the purpose of preventing their lands from washing. Several farmers informed me that they were somewhat fearful that it would eventually become so general that it would destroy their timothy and other more useful stock grasses, but this fear is rather slightly founded, because the Japan is far smaller, and I think less strong than either timothy, white or red clover; but time alone can solve this question.

The stock of every kind are very fond of it, and fatten very quickly while feed-

ing on it. Its appearance in this State is surrounded with mystery, and while many conjectures are afloat concerning its origin, &c., I consider none of them worthy of notice. An aged farmer remarked to me, that he believed "God had sent it to keep the stock from starving during the reconstruction of our labor." One thing is certain concerning its appearance, that is the date of its arrival. It was first noticed in 1861, and since then it has been marching in every direction, and, in my opinion, will soon spread over the entire State. It seems to flourish more abundantly in the shade than in the sun, and therefore it promises to become a fine woods' pasture grass. I wish I was sufficiently posted to furnish, for publication, a detailed account of this mysterious and valuable addition to our stock stores; but I am not, and must, therefore, beg you will be satisfied with this slight and very imperfect communication. If you desire further information concerning it, you can obtain it, I am certain, from Rev. T. S. W. Mott, Sherrell's Ford, N. C., who has, I learn, carefully studied it characteristics. I am a citizen of Louisville, Ky., and have written this notice simply to attract your attention to this grass, and hoping I have accomplished this desire, I subscribe myself. WM. F. BEASLEY.

Greensboro, N. C., June 15, 1869.

[From the American Farmer.]

Drainage—Rotation—Manuring.

CLIFTON, Fairfax Co., Va., April, '69.

MR EDITOR: We have arrived to a point in agriculture where we must acknowledge the importance of a proper system. Only by adopting such, *based* on knowledge of the different requirements for the growth of the plants we cultivate, we will be enabled to obtain such profits from farming as we ought to have. The *base* of our operations is *drainage*, if possible, *subsoil* drainage. You may exclaim: "'*let us have peace*'—we have heard and read enough on this subject." But, sir, it is with drainage as with advertisements—you read an advertisement perhaps fifty times without taking any notice, and on the fifty-first time you say: "why, they advertise so doggedly, that I will try it anyhow." And so it is with drainage. Farmers may read about it for a year, and the subject being constantly kept before them, they at last conclude to make a trial. If not fully convinced of the benefit, make a small trial. Even the poorest farmer can try it with an acre. The time for the labor required can always be found. True, there are very few who thoroughly understand the business, and if not properly executed, the result may be a failure. To prevent this, I offer to undertake the superintendence of subsoil drainage for a moderate compensation. As I have had considerable experience in this branch, I feel confident in obtaining the best results. In subsoil draining, there are three important points to be kept in view: first, not to have the drains *too far* apart; second, not to make them shallower than *two feet and a half*—better *three* and *three feet and a half;* third, *never* to lay drains up and down a hill, but *slanting*. As the water is inclined to drain straight down hill, it may remain between two drains; whereas, if the drains are slanting, the water is sure, under all circumstances, to strike a drain within thirty yards, provided the drains are twenty yards apart.

Great many farmers believe that subsoil drainage is only beneficial to low land—but this is an error. Although low and wet land, of course, are most benefited, still subsoil drainage is also of the greatest benefit to high land. Subsoil drainage not only frees the land from surplus water, but creates a circulation of air under the surface. The roots which have extended deep into the ground are enabled to come into quicker and more thorough contact with the air, which is so essential to the growth of every plant. Furthermore, in dry seasons, the moisture of the night air is circulated through the drains, and enables the plants to withstand a greater amount of drought.

Having prepared your land by drainage, the next thing is to adopt a proper system. By system, we understand a judicious rotation of the different plants we intend to cultivate and the proper preparation and melioration of the land.

In choosing a rotation, we have to take into consideration climate, soil, location, and peculiarities, if such exist. It is im-

possible to recommend a certain rotation for all localities and soils. Every farmer will have to decide on this subject according to his own judgment. But there are some rules which work *everywhere* and which must be followed, whatever your plan may be. These rules are: to grow a leguminous crop every other year; never to take more than three crops without returning with manure, and to have red clover *at least* one in every rotation. To give an example, we will propose a rotation for clay loam, particularly well adapted to wheat and red clover: 1, corn; 2, barley, manured with clover; 3, clover; 4, clover; 5, wheat; 6, potatoes and turnips, manured; 7, wheat with clover, 8 and 9, clover. Having selected a rotation, the next thing is to prepare the land thoroughly for the crops. Different crops require different preparation, and as it is not our object at present to describe the proper treatment of the soil for all the different crops we grow, we will confine ourselves to say, that *thorough* ploughing in proper season, *careful* manuring, and *plenty of harrowing*, and where required, of *rolling*, are the principal points for every crop. As a general thing, *harrowing* and *rolling* is not *half* enough done in our country. One good ploughing and *harrowing* is equal to *two* ploughings. The same with *rolling*. When the land is lumpy or very loose, a rolling is most beneficial; it breaks the lumps on heavy land and compresses the loose soil.

In applying manure to the best advantage, good judgment is required. Leguminous plants, as potatoes, turnips, cabbage, peas &c., require rotten manure, whereas wheat, oats, corn, &c., are benefited by fresh manure applied at the second last ploughing. For top-dressing, compost is the proper manure. The quantity of manure to be applied has to be regulated by the condition of the land and the length of time before the next coat of manure will be given. The most profitable mode of manuring is to give enough for one crop at the time, and to repeat *annually*. By applying a heavy coat at once, you invest a capital which only will return interest in the course of three years; whereas, if you do not apply more at the time than required for one crop, you will have your interest back at the first harvest. Besides, if you give a heavy coat, you run the risk that part of it may be lost by dry rot in dry seasons. Whatever system you adopt, let it never expand over a larger area than you are able to manure *well*. By confining yourself to this principle, you will reap such abundance that you annually can enlarge your field of operations.

L. A. HANSEN.

Prevention of Disease in Swine.

Hogs are seldom diseased when they are allowed to wander through the fields and woods, for they know the remedies that are necessary when the first symptoms of sickness appear, and they are very prompt in making use of them. An intelligent farmer in England, seeing one of his hogs lying sick in the pen, laid a spadeful of earth near its nose. The hog got up and began to eat it greedily. A spadeful of cinders was then introduced. This was eaten greedily, which caused the animal to vomit copiously, and in a few hours it was quite well.

When hogs are shut up in a paved or planked pen, they ought to be supplied with diet as nearly resembling their natural food as possible, and especially with that which contains a portion of sulphur. Common mustard, or a few plants of wild mustard, will supply this; at other times a little radish, or the top rind of Swedish or other turnips. A little flour of sulphur, or a teaspoonful of Glauber salts, may be mixed with their food.

The cruciferous plants seem to be especial favorites with swine, for they contain small portions of acrid vegetable oil, having sulphur in its composition. Horse-radish is extremely useful to them, and they are very fond of it. It is said that the breath of a healthy hog always smells of horse-radish, even when the animal has no access to that plant. The peculiar smell of horse-radish arises from the sulphurous, volatile oil in it.

Of all the domesticated animals, swine are most subject to acidity of the stomach. They come to maturity so rapidly, and lay on so much fat, that they need much more attention than is generally bestowed on them when shut up and fed on artificial food. The swine is not naturally a lover of filth; the den or lair of the wild

boar, and the bed of the wild sow, are clean. The domestic hog, when subjected to man's mismanagement, is driven to wallow in the mire, the alkaline properties of which have a soothing effect on its skin. Whey and sour milk make very nutritious food for pigs. These contain a considerable of the sulphuric phosphoric acids necessary to build their frames. But this food, when the animals are deprived of exercise, produces acidity of the stomach, and acidity injures the coats of the stomach, weakens the bones, and vitiates the fluids. As a corrective of this evil, a small sprinkling of powdered chalk should be mixed with the food once a week, to prevent diseases of the skin.

The sickness of the hog above referred to was no doubt occasioned by acidity of the stomach, and the earth was eaten to counteract its effects. The coal-cinders contained as much sulphur as formed sulphuretted hydrogen in the stomach, and caused vomiting.

Sulphuret of antimony, called black antimony, is too often given to hogs by persons ignorant of its nature and action. When sweating is necessary, it may be as useful as any other medicine, the dose being proportioned to the size of the hog. White antimonial powder has nearly the same properties as black antimony; as it has neither smell nor taste, it is more readily taken. In the hands of a practical physician emetic tarter may be useful, but it is not a medicine for common use, it being very powerful.

Some persons are very liberal in administering medicines to hogs, dosing them repeatedly to sweat away disease, when they are sick, yet, as soon as the patients recover, returning to the same careless and improper management which produced the disease. Prevention is better than cure. When roaming through the woods and prairies, the hog is his own physician; but, confined in a yard or pen, he should be supplied with the preventives of the various diseases to which he is subject. A mixture of earth and chalk should always be within his reach. Perfect cleanliness should be observed, and food and drink should be given with regularity and at suitable intervals. A proper condition of the bowels should be kept up. By attending to these particulars, the health of swine would be preserved, and we would not hear much about "hog distemper," or "hog cholera." *Experimental Farm Journal.*

Working Bulls.

As we keep our bulls in this country, there is a vast amount of power that runs to waste which would be very willingly laid out. We might severely tax the strength and endurance of any bull, not otherwise overworked, and he would be the better for it—a surer stock-getter, and a sire of finer animals; and besides, which is after all the greatest advantage, we should thus be able to keep bulls until they are really aged. We need hardly argue the question, if a reasonable amount of labor is an advantage to the bull. It is a recognized fact, that a due amount of exercise is essential to the highest wellbeing of all animals, and especially those used for breeding. If this exercise be taken in hard labor, provided it be not excessive, the experience of thousands of horse owners, and of many bull owners, in this and other lands, shows it to be entirely beneficial. The farmer, then, is doubly the gainer. He has the labor of the animal, and the bull is better for it. Few farmers keep more than one bull, and hence it is that they are not more in the habit of working them. A bull may be worked alone with a suitable harness in a cart or wagon, and before the plow, harrow, or stone-boat. He is deliberate in his movements, but powerful, and a single bull will often do as much ploughing as a pair of cattle. We have seen a bull turn a twelve-inch furrow eight inches deep in sod with perfect ease, and walk as quickly as a smart pair of oxen. He must be put early in training, taught to be guided by lines attached to the nose ring, and put early at such labor as he can do. We do not place the bull or any of his kindred high in the scale of intelligence, but very high in a scale of animals with which habit becomes second nature. Cattle are not very easily taught, but when taught, may be relied upon. Bulls are usually dangerous, because so little exercised, and never fairly subjugated. To *subjugate* a bull, he must emphatically be brought *under*

the yoke. There is great difference in the disposition of bulls, and while we advise no one under any circumstances to trust a bull beyond immediate control, we fully believe that nine-tenths of the young bulls in the country, if put to work, would be docile and useful, and might be kept for ten or fifteen years, greatly to the improvement of our stock.

Good and Bad Farm Stock.

There is no fact in agriculture more fully established than that it will not pay to keep poor stock, when it is possible to secure that of a better quality. A few years since the rage for Durham, Alderney, Devon and other breeds of cattle prevailed very extensively throughout the country. Fabulous prices were paid for superior animals of these breeds, and there appeared to be a fair prospect of something like a reform in the matter of stock raising. Like so many other movements in agriculture, this spirit of improvement has subsided, and we find our farmers relapsed into their former apathy. Should this be? The cost of keeping an inferior cow is precisely the same as that of a better one. A good horse will always command a better price in the market, or is more valuable to its owner for his own purpose than a poor one. The cost of keep is the same. Why not, then, raise the best horses? There are breeds of swine that grow rapidly and fatten upon much less food, and in a shorter time than others. Why not procure these improved kinds? The same may be said of sheep, poultry and, in fact, every kind of farm stock, and yet we find thousands of farmers, in the face of these incontrovertible facts, arraying themselves in steady hostility to all movements having for their object the improvement of domestic farm animals. They cling to inferior stock with a pertinacity that is surprising. In many cases the secret of the matter is their unwillingness to make the first investment. Fifteen dollars apiece seems to be a large price to pay for a two months' old Chester County White pig, when commoner animals can be had at one-fifth the price, but all experience proves that in the long run the best are the cheapest. Were it possible to overcome the indisposition to make the first outlay, there would be room for indulgence of the hope that our farm stock generally would improve in character. This will be accomplished only when farmers realize fully the fact that it does not pay to keep poor stock.—*Journal of the Farm.*

Ex-Governor Z. B. Vance, in his address before the Border Agricultural Fair at Danville last Fall, offered the following practical suggestion:

In a country so sparsely settled as ours, and where lands are held in such large bodies, the theory of a division of labor is not sound economy in farming operations. Every farm should be as nearly independent, as self-supporting in all respects as it can possibly be made. In mercantile parlance, a farmer should, if possible, be a *general dealer* to at least the extent of his own consumption. Planting, therefore, as contradistinguished from farming—by which we understand a special devotion to cotton, rice, tobacco, or any great staple—is liable to this objection, it is not self-sustaining. An imperfect and unwise arrangement, that is by which so many of our planters expend the proceeds of their staple crops for provisions and stock, thus paying double profits and commissions as well as shipping away the fatness of their soils every year and placing nothing back in lieu of it.

Every man who tills the soil as a means of living should surely first provide himself with everything which his farm will grow before he plants a single seed for sale. Another great objection to planting, or special farming, is that it is ruinously destructive to fertility and an enemy to the improvement of lands. It is, I believe, an accepted truth that there are no means of permanent improvement in our soils equal to the cultivation of some of the grasses and the rearing of flocks, which both "retain" and "return" to the earth. We are here directly on the dividing line between the "planting" and "grazing" regions of the United States, and by judicious and scientific intermingling of both, I give it as my unhesitating opinion that we stand in a better portion to secure wealth by agricultural means, than any other people on the continent.

CORRESPONDENCE.

[For the RECONSTRUCTED FARMER.]

Bermuda and Wire Grass.

Messrs. EDITORS:

Do you know what Bermuda grass is? I ask the question from having read T. C. Peters' article, "Sheep pasturage in the South." I do not think he overrates the resources of the South in this line; and I agree with him that we have generally waged a war against grass, entirely too severe and indiscriminate. The present new regime invites us to make a truce with an oft defeated enemy—to lift him up from the furrow and bid him live and flourish. But like prudent soldiers, we must do so with great discrimination.

Mr. Peters says: "The spread of some of these most valuable grasses, like the Bermuda grass, was fought with the utmost obstinacy," and he thinks, "the propagation of the Bermuda grass a priceless boon to the South," &c.

If we wish to return the whole South to the primitive condition of pastoral life, by all means cultivate Bermuda grass—or rather, stop fighting it—and you will soon have a country fit for nothing but grazing; for I am sure it is nothing else but what we call *wire grass* in North Carolina, (not the Kentucky sort,) and at the South, Bermuda grass. It has been known in the South for more than a century—was no doubt imported, and cannot be extirpated by the hardest fighting—grows on the hardest and softest, stiffest and lightest, wet and dry, soils of the most opposite characters; hogs and sheep will devour it to its very roots, which, like reed roots, or wire with a thousand joints, runs on and under the ground, defying all efforts to destoy it—a perfect pest, which renders a judicious system of rotation next to impossible. Unfit for mowing, it is unrivalled for grazing—every animal is fond of it.

In the South I believe it is not considered such a dreadful pest as we do here. The reason has been because this country is new, soil strong and fresh, which, cultivated every year in cotton or hoe crops, and kept clean by their heavy force of field hands, so that they seldom had rest or rotation, and this, like other grasses, seemed to be nearly dead; but the least rest or rotation, to grass or small grain, would show it only slept.

A singular circumstance happened this year within four miles of Tarboro: A gentleman cleared up a grove of several acres, on which he burnt many large brush heaps, and it is a singular fact that this wire grass came up abundantly in the ashes of the burnt heaps, while little or none came anywhere else. The ground has never been cleared before.

WATCHMAN.

[For the RECONSTRUCTED FARMER.]

Interesting Extracts from Ancient Agricultural Writers.

MESSRS. EDITORS.—In agriculture, as in everything else, we Americans are apt to think we know more than the world ever knew before. As a proof that the ancients knew something about agriculture as well as ourselves, I send some extracts from ancient writers—some as far back as the fourth or fifth century before Christ; and even then they were spoken of as drawn from the experience of ages. They are from Abbe' Barthelany's Collocation of various Ancient Writers on Agriculture.

COMPOSTING.

XENOPHON.—All your time and all your care should be devoted to the earth. The more you do for her the more she will do for you: for she is only so beneficent because she is just.

THEOPHRASTUS.—First choose a favorable situation: study the nature of soils, and manures proper for each production. Inform yourself when it may be necessary to mingle soils of different kinds, (*that is composted*), and when the earth should be mixed with dung, or dung with the grain.

WHEAT.

In the cultivation of wheat, redouble your labors. Do not commit to the earth the grain from your last crop, but that of the preceding year.

XENOPHON.—Sow sooner or later, according to the temperature of the seasons; and thicker or thinner, according as the earth is lighter or heavier; but always sow equally.

THEOPHRASTUS.—Should your wheat run up too high, be careful to cut it, or turn in sheep to browse on it: the former of these methods is sometimes dangerous, and makes the grain long and thin.

XENOPHON.—When you reap, if you have much straw, only cut half of it (that is of height) and burn what remains on the ground for manure. Lay up your wheat in a dry place; and that it may keep a long time, do not spread it, but heap it up, and even water it.

GRAPE VINES.

THEOPHRASTUS.—Manure your vines once in four years, or not so often; more frequent manurings would burn them up. The object of pruning is to render the vine stronger, more fruitful and longer-lived.

In ground newly cleared a young vine should be pruned in the third year; but later in soil long cultivated.

Some maintain that pruning ought to be performed early in the season, (autumn), because if done in winter the wound cannot close, and the buds may be dried up with cold; and if done in the spring, the vine bleeds and the sap will flow over the buds near the wound.

Others make distinctions according to the nature of the soil. They say vines in a thin, dry soil should be pruned in autumn; those in a cold, moist soil in spring; by these means the first would preserve the sap necessary for them, and the second lose that which is superfluous. One proof, say they, that in moist ground pruning should be deferred till spring, and so make part of the sap flow off, is the custom we have of sowing, in vineyards, barley and beans, which absorb the humidity of the soil and prevent the vine from exhausting itself in useless branches.

LONG AND SHORT PRUNING.

THEOPHRASTUS.—Vine-drapers are divided on the question of long and short pruning. Some determine it by the nature of the plant or the soil; others on the quantity of sap in the branches: if the sap is abundant several short sprouts may be left, that the vine may produce more grapes; but if but little sap, fewer shoots should be left, and the vine pruned longer. Vines with many branches and few grapes require that shoots at the top be pruned long, and those lower down short, to strengthen the vine at the root, and at the same time make the top branches produce much fruit.

DEMOCRITUS.—Prune young vines short, that they may grow stronger; for vines pruned long may produce more fruit, but sooner die.

TIBERINUS.—Would you wish to restore youth to a vine nearly dead with old age? Remove the earth on one side, pick and clean the roots, applying to them different kinds of manures and covering them with earth. It will produce scarcely any fruit the first year; but after three or four years it regains its former vigor. These precautions taken every ten years will, in some measure, render your vine immortal.

CALUMELLA AND PLINY.—To obtain grapes without stones: Take a vine-shoot, cut it lightly on the part to be set in the ground; take out the pith from this part, unite the two sides separated by cutting, cover them with wet paper and plant it in the earth. The experiment will succeed better if the part thus prepared be put in a sea onion (supposed to be sponge) before planting.

THEOPHRASTUS.—Would you wish to have on the same vine black and white grapes? Take a shoot of each kind, bruise them in their upper parts so that they may closely unite, tie them together and plant them.

SHEEP.

ARISTOTLE.—Sheep grow fatter, the

more water they drink. To excite their thirst, salt is often put in their food. In summer, especially, a medimnus of salt (4 bushels) for each five hundred sheep is distributed among them every week.

A GLEANER.

The Spading Fork.

We are glad to see that our effort to introduce this implement as a substitute in so many cases for the clumsy spade, has been so generally successful. We see them now in general use. A correspondent of the *Journal of Agriculture* says of it:

"I know of no tool that has been introduced within a few years that is so useful as the spading fork. On an average, I believe a man will do one-third more work with it than with the common spade, and do it easier and better also. I speak of digging over the garden preparatory to planting, or working among currant bushes and the like; and then for digging potatoes, I have found it one of the best tools I ever used. It may be used also in the cultivation of any garden crop when one has no horse, or has not room to use him. There are always little patches that must be worked by hand, and no tool is so useful for this purpose as the spading fork."

We have had some difficulty in getting them good—many breaking off with heavy work at the neck. There is a kind found in some of the hardware stores of Philadelphia, made by the "Williamsport Fork Company," which are as near perfect as anything can well be.

BLEEDING FROM THE NOSE.—Put a piece of paper in your mouth, chew it rapidly, and it will stop your nose from bleeding. This remedy has been tried frequently, it is stated, and always with success.

Physicians say that placing a small role of paper or muslin above the front teeth, under the upper lip, and pressing hard on the same, will arrest bleeding from the nose—checking the passage of blood through the arteries leading to the nose.

MOTHS never attempt to cut their way through cotton cloth.

Note on Curculio.

BY WM. ARCHER, TRENTON FALLS, N. Y.

I see in your columns several plans advanced for the destruction of the curculio. If some of your renders will adopt the plan that I have practiced for the last 15 years, *with entire success*, the curculio won't deter them from planting on as large a scale as they please.

Take an old tin pail, punch holes in the bottom like a sieve; procure a pole long enough to reach above your trees, tie the pail on the top of the pole, put some air-slacked lime in the pail, raise it over the top of the trees, strike the pole with your hand, and you will send a shower of lime all over the trees; the operation ought to be performed about three times; first when the flower begins to expand, and again in four or five days; three times is about enough; each operation must be performed in the morning, when the dew is on the trees.—*Gardener's Monthly.*

HORSE RADISH PLANT.—*B. S., Brooklyn, N. Y.*—There are many plans of setting out Horse Radish. The best one is to cut the roots into pieces of about an inch in length, make a hole, about one foot deep, with a crowbar, let the small piece in, *down to the bottom*, and then with very rich earth or manure from a wheelbarrow, fill in the hole. The sprout will come up through this, and make a *clean, straight* growth, one of the merits of good Horse Radish. You ask "whose method" is the best. We do not know that this plan has anybody's particular name. It is, we think, originally a German plan. We believe we have given it long ago in the *Gardener's Monthly*. It is not, however, found in the regular gardening books, and if you want a name for it, you may call it the *Gardener's Monthly* plan. *Gardener's Monthly.*

IN the summer old potatoes should be peeled and soaked in cold water several hours before they are cooked. This makes them nearly as dry and good as when first dug in autumn. Old potatoes should be put in cold water, with a little salt in the pot. Boil slowly—the slower the better. If the water stops boiling, they are apt to be watery.

Oil as a Remedy against Insects.

Many years ago we were interested in some experiments made by some medical students on the destruction of insect life by oil. The slightest drop of sweet oil, put on the back of a hornet, beetle, bee or similar thing, caused its instant destruction. We were told the breathing pores were closed by the oil and the life was literally smothered out. In after life greasy water was always a favorite mode with us of destroying insects, and we have repeatedly urged it upon the readers of this journal. Yet we are astonished to find how little the hint has been acted on. Almost every day we meet people who ask how to destroy this insect or that, and our drawer is filled with similar inquiries; and to all the idea of grease or oil seems as new a one as if we had kept the matter a profound secret.

Of the millions of people in the United States, how few are there who would not "give anything," as they say, to know how to keep away the cabbage fly from their seed beds; yet about a tablespoonful of coal oil put in a common garden water-pot of water, sprinkled over the seed bed, when the little jumping beetle is noticed as having appeared, will instantly destroy the whole brood.

A correspondent of this journal recently gave us an article on the virtues of coal oil in killing scale insects. We have repeated the experiment on some Daphnes with entire success.

In short, we have no doubt that coal oil, well diluted with water, is death to all kinds of insects, and there is no reason why it should not be in as general use as tobacco is for killing aphides—more valuable, in fact, because it can be applied in so many cases where smoke cannot.

One great point in favor of coal oil is that it acts as a manure to vegetation, while dealing out death to insects. We have seen cabbage beds nearly destroyed by the cabbage fly, have the whole crop of beetles destroyed almost instantaneously; while in a few days afterwards the plants, as by magic, would cover the bed with luxuriant leaves.

We do not believe that the undiluted oil would prove injurious to the leaves, but such extravagance is unnecessary, as the small quantity we have given is effectual.

No doubt the egg-plant fly, and all insects that can be reached by the oil, can be destroyed.

There is scarcely one of our readers to whom we are sure this hint alone will not be worth many annual subscriptions.

We may add that any oil is as good as coal oil, but that being likely to be more easily obtained when wanted, is recommended; also, care must be used to keep the water in the pot stirred when used, so that a portion of the oil gets out as the water runs, otherwise the oil floating on the top of the water will stay there till all the water goes out and only the oil be left for the last. For this reason a syringe, in many cases, will be preferable to the water-pot, as the oil and water will have a better chance of getting out.—*Gardener's Monthly.*

WHAT IS MUCK?—This question comes to us, says the *American Agriculturist*, almost every month in the year, and now and then we answer it, as we would be glad to do twelve times in a year if that were necessary. "Muck is money," says an English proverb. Muck is manure in English parlance, and covers pretty much everything that is soft or moist and pasty. We apply the word almost exclusively in our agricultural technology to the partly decayed vegetable matter of swamps and peat mosses—even applying it to peat fit for fuel, if it be used as manure, or as an absorbent in cattle stalls. After getting it out, let it freeze and thaw, or if on drying it is not very hard and lumpy, compost it with lime and it will become fine and crumbly. It is often rich in ammonia and always useful in composts.

HOW DOES WATER GET INTO DRAINING TILES?—The *American Agriculturist* says: The answer is a very short one. *It leaks in.* The soil outside of the pipe is saturated with water, which is pressing downward, seeking an outlet. The open joint between the ends of two draining tiles is a crack through which it can find its way. Once inside the tiles, it runs off and leaves room for more to follow.

The Reconstructed Farmer.

JAMES R. THIGPEN, }
JOHN S DANCY, } - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

$2 PER ANNUM, IN ADVANCE.

TARBORO', N. C., AUGUST, 1869.

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Range of Thermometer at Tarboro, N. C., for the month of June.—Average 73½ Farenheit. Average 92 at the hottest part of the day. First two weeks of the month moderate summer weather. From Sunday, 20th, till the close of the month very hot. The whole month was remarkably favorable for cotton and corn, and the prospect continues excellent to this date, (July 15th.)

Let us have a Short Play Time.

The pressing labor, with the many incessant anxieties attendant upon the many duties to be performed by the farmer during the cultivation and harvesting of the crop, is now over; therefore we suggest the propriety of taking some recreation.

Well do we recollect those days when the crop was finished (from the fourth of July to the first of August;) the pigs, lambs, and beeves that were slaughtered, and the neighbors around invited to the feast.

At the same time do we well remember how highly delighted the servants or slaves were at these annual feasts, (their masters intended for them) with their banjos in hand; and if we are not much mistaken, they then enjoyed more solid pleasure in that one day's repast than four-fifths of them ever will enjoy again.

They then had some one to look over and care for them in sickness and in health. Alas! Poor, unfortunate race, you are going out; the white man must take your place.

In those days, hundreds of farmers went to the mountains, watering-places, and to the sea shore, to spend the summer months; but how changed is their condition.

It seems as though we had been translated from this to another country, differing in every social and political respect. While it behooves us as a great and magnanimous race to make the most of this great change, let us never lose sight of that associated effort which is necessary to the accomplishment of all great ends.

Let us spend a few days of pleasant association this month with our relatives, neighbors and friends. Let agricultural societies and clubs, where they exist, appoint committees to visit the societies and clubs of adjoining counties, to interchange sentiments upon farming.

Associate yourselves together in the formation of agricultural societies and clubs in every county where they do not exist, and especially in Eastern North Carolina. This will have a tendency to bring about a crop of new ideas, which will be sure to be as a crop of good seed

for the coming crop of next year, and will add considerably to the productions of the farms in 1870.

Not only so. They might exert a salutary influence upon the present system of labor. All must admit that a change is needed. To have so many able-bodied idlers loafing over the country, stealing, consuming, and not producing, ought to be stopped.

This can be done to a certain extent. How? By associated effort. Not one man nor can a dozen men do it. It will require a general effort of the farmers throughout the country to bring it about speedily.

Some may ask, how can this be effected? By not allowing any idler to have a home upon your premises, and not to hire any man who has left your neighbor, unless he can show that he has not violated his contract with him.

Farmers, we will pursue this subject in some future number; but we do here contend that the time has come when farmers must do as the leaders of all other professions—that is, they must organize to protect their own interest.

In this month let the great work begin, so that we may be ready to commence all right in 1870. We call upon all men who have professions to join us in this effort; for upon the success of the farmer depends the success of all other professions.

Osage Orange Hedge.

We planted, in last April, six hundred yards in Osage Orange plants, of which we propose to make a hedge.

Thus far the plants promise well, considering they were planted late in the season, and at a very dry time. We intend to plant several thousand plants next fall, as we presume the fall is the proper time to plant the hedge.

Farmers, we ought to adopt some system for enclosing our land different from the ordinary mode of fencing, for the present system is too expensive, even where one has the timber in abundance.

We know a number of planters are scarce of timber, and consequently they will be forced to adopt some course different from the present one, or be subject to great cost, to say nothing of the inconvenience of hauling their rails from some neighboring farm.

We are satisfied from what we have seen in neighboring States, that there are but few, if any farmers, who could not save money by discarding the old-style fence and substituting the Osage Orange hedge.

For instance, you could hedge your garden and orchard so securely that a thief would be much troubled to enter, which is certainly a consideration of some importance in these days of general stealing.

We do not intend to advise planters to engage in anything that we believe will not pay them; but this is one of the many things we request them to make an experiment at.

These plants are hardy and will grow on any soil that is rich, with proper cultivation. Where you purpose to plant, if it is not sufficiently rich, you can soon make it fertile enough to produce a luxuriant hedge.

The cultivation is simple and easy, and the idea that a man can enclose his farm, in the period of five years, with not only an ornamental fence, but with one that is worth all the wood fences that could be placed upon it, is a consideration to which our people should turn their attention.

The plants will not cost you much, as you can purchase a sufficiency with $40 to plant two thousand yards of hedge, or you can purchase the seed and raise your own plants.

Fences—No. 1.

It seems that our planters, as a class, are so chained to the time-honored habits of their fathers that they are content to live under the present law of enclosure without endeavoring to make any effort to show how unlike the conditions and circumstances of the present time are in comparison with those of a century back.

Our progenitors thought the law of enclosure was needful, and they were right in adopting it. Why? Because this country was then an almost complete forest. The farms were then mere patches, and farming a secondary consideration.

Stock raising was then more profitable in all sections than farming, consequently they adopted this law. Is stock raising of the present time to be compared with that of those days? Or is it as profitable as farming?

If so, why do we appropriate one half of the cotton, tobacco and rice of the South to purchase mules, pork, beef, and the many articles of prime necessity which our fathers were strangers to?

Was a hundred acres of land in those days as expensive to enclose as at present?

We hold it was not; for then the timber was abundant, while at present it is scarce in many sections, and having been culled over, it is much worse to fence a hundred acres now than then.

Why, then, should we continue to hold fast to such a law when our condition is so different from that of our fathers? We hold that in every section where the farmers (who are the back-bone of a country) are the sufferers by this law, it should be abolished; but in the sections of country where they are benefitted by the law of enclosure, as a matter of justice let them have it.

For instance, in that portion of this State where the proper crop is hay, small grain and stock raising, it is better for them and the country that they have the benefit of this law. But this does not hold good in this section, where the people do not regard stock raising with that degree of profit they ought to.

We do contend that in every section of country this law should be abolished where supplies are purchased; for this is evidence sufficient to demonstrate that the law is not only a tax upon the farmers, but upon the treasury of the State also.

If the immense tax this law imposes on the people to keep up their fences was appropriated in a different way, it could but add infinitely more to the prosperity and happiness of our people.

You would not then see farms disfigured with fences running here and there. You would not see the roads angling in every direction to save fence; consequently the commerce of the country would be greatly improved, which would not only be a great convenience, but an actual income to all the people.

You would not see the sorry breeds of bulls and boars roaming the country, consequently the breeds of stock would soon commence to improve, which would form an item of no small advantage.

Your canals and lead ditches then would not be subject to be filled up at certain places by half famished stock. So here is another item of income to be added.

You would not need so many gates, as you could haul your compost and travel over the farm with less inconvenience, since you would not have to go out of the way through gates or pull the fence down.

You would save at least three acres of ground occupied by fence, besides the noxious bushes and weeds that grow along the line of the fence. You could

devote the labor of splitting rails, hauling and fencing, to improving the soil, which would be an item of gain.

You could save the timber, which in a coming time will be twice as valuable as at present, which is a consideration not to be overlooked. You would then, in case of freshets upon the large creeks and rivers, be secure from the ravages of stock, where your fences are sometimes swept away.

You would then do away with that which has produced more personal difficulties and made more enemies among neighbors than any other cause.

FINE POTATOES.—Mr. M. S. Fulford, of Rocky Mount, purchased of R. Buish, Philadelphia, in March, 3¼ lbs. of the celebrated "Early Rose Irish Potato." He has saved from this small quantity 4¼ bushels, or about 260 lbs. in weight. One dozen potatoes were sent us by Mr. F., and we pronounce them the handsomest we have ever seen. Mr. F. says of them, "they are the finest flavored potatoes I ever saw and the earliest." This yield is enormous. Can the North or West beat it? We would like to have Mr. F's method of preparing the land, manuring and cultivation, for a future number.

BATTLEBORO', N. C., July 10, '69.

Messrs. THIGPEN & DANCY:

Gentlemen—Can you tell me of any kind of grass that will grow on land overflowed every year, and not get killed out? JESSE H. POWELL.

We know of none save that common to our low grounds on the creeks and rivers of Eastern North Carolina. Whether the famous pasture and hay grasses—timothy, herd grass, blue grass, &c.—would survive an overflow, we are not prepared to say. Would thank any of our subscribers or exchanges for information on this point.

How to Keep Sweet Potatoes.

We often hear it said, "we cannot keep sweet potatoes."

We believe it is generally admitted that sweet potatoes are not difficult to keep if put up in small hills and well banked and sheltered before they are frost-bitten.

The greatest trouble about potatoes put up in this manner is, they cannot be used to advantage in winter, because upon the hills being opened they are apt to rot soon.

We, therefore, suggest a plan by which sweet potatoes can be kept sound through the year. Last summer we built a house upon the following style, and our success was all that we could desire:

This house is on sills, twenty-eight feet long by twenty feet wide, and eight feet pitch. The wall is double, weather-boarded outside and in, which forms a space of ten inches between the walls, and this is filled with saw-dust. There is a floor below and one above. Two doors—one at each end—and a passage of four feet extending through the house. Four ventilators—two through the upper floor and one on each side. There are five partitions on each side of the passage, each two feet high, with another set of planks laid above them, forming, as it were, a second floor. In these partitions, and upon this second floor we placed the potatoes. We let both doors remain open every day until the weather began to be quite cool, almost freezing; then we closed them and kept them closed, except when we entered at the south door.

A house of this description can be built very cheap. For instance, it can be made of posts ten by six inches, and walled up on each side; or it may be made of polls by notching up a double wall, which may succeed well, provided

the house is sufficiently tight to keep out the winter's freeze, and at the same time so ventilated as to save the potatoes from being overheated.

Some of our readers will agree that there are more potatoes injured from being overheated when housed in large quantities than from any other cause; therefore if you will adopt the foregoing plan, we feel quite certain that you will never have cause to regret the cost of such a building.

How to Keep Winter Apples.

Winter apples may be kept in the following manner, without a doubt:

They may be kept upon the upper floor of the potato house, alluded to elsewhere, or upon any other loft floor that has a tight roof, by placing a layer of cotton seed on the floor so thick as not to freeze through from the bottom. Upon these seed place your apples regularly, and let them remain until the weather comes near freezing, then throw a sufficiency of cotton seed on them to keep them from freezing from above.

In gathering the apples be very careful not to bruise them, for when bruised they will not keep. The apples on the lowest branches of the tree can be gathered with the hand, by making a bench to stand upon and having a basket convenient to place them in. To gather from the top branches, you should go up the tree and have a sack to put them in.

In the loft where our apples are kept there is a large window in the end of the house opposite the door, which we keep open every warm day after our apples are first housed.

Apples kept this way will be much nicer than when put in sand, and will remain sound until the heat of the summer reaches them. This we know from seven years experience.

Engagements for Next Year.

Those who crop on shares should now have a thought for the future. The crops are made so far as manual labor is concerned. Next year begins to loom up to the mind's visage, and preparations should be made accordingly. The freedman who crops on shares is equally interested with the land owner. The larger the product to the acre the better it is for both. So now is the time, freedman and land owner, to have your "talks," and let them be short, for too much mouthing worries the spirit. Come to a bargain and go to work shrubbing, cleaning out ditches, repairing fences, getting together material for your compost heap, or your stables and stock yards. Everything of this kind will add dollars to your next year's share, and improve the land. Do not let the warm sun of August, or too long a holiday, prevent you from heeding and taking advantage of this advice.

Agricultural Fairs.

We welcome the reorganization of the State Agricultural Society, and are pleased to see it officially announced that the annual Fairs (in October) would be resumed this fall. The brilliant crop prospects at this writing (15th July) in Eastern North Carolina fills the heart of the farmer with gladness. Everything looks bright for an abundant crop of cotton and corn, and for paying prices. We trust, then, to see a full attendance in Raleigh at the first annual Fair since the close of the war. Let the East and West come together as of yore. Bring your fine milch cows, your butter, cheese, &c., from the mountains. We of the East take pleasure in seeing your fine specimens of good living. Let the East have there, too, her varied products. Eastern and Western people should see

more of each other, become better acquainted, and remove that old political jealousy entirely, that has, and we presume to some extent still exists. We take it there is no State of the Union where the people are so far removed from each other as Eastern and Western North Carolina. Come, then, brethren of the hills and mountains, meet us in Raleigh in October, and have a chit-chat with us.

Do not overlook the Fair in Wilmington in November. Ample preparations are making to accommodate everybody. We shall be happy to see the mountains come down and take a look at our fine Cape Fear country, and get a peep at "old Ocean." Wilmington can truly boast of more enterprise than any town in the State. She stands first and foremost in her imports and exports. 'Tis meet that such enterprise should pay its respects to agriculture. The Fair there in November must be a success. The Cape Fear and railroad counties tributary to Wilmington will make it so. We hope to see Edgecombe there in heavy force—her sturdy men and fair women must be on hand.

Book Farming.

There still exists in the minds of many good and well-meaning people a prejudice against those who farm by the book. This feeling is unfounded, and we hope to remove it. "Book farming" is nothing more nor less than farming by and through the experience of others, derived from reading agricultural works. Every farmer derives his information from books, his own experience, or from conversations with others, and what he derives from conversing with others, is nothing more nor less than that farmer's experience, or the experience of the neighborhood, handed down from sire to son, and known as tradition. A young man cannot take charge of a farm and manage it successfully without relying upon the experience of some one, derived either from books or conversation. Rely upon it, if he undertakes it, and counsels with himself alone, he will every time have a fool for his client. What makes the lawyer, the doctor, or the general superior to the farmer and merchant on all matters touching law, medicine, or military affairs? Is it not the study of books (the accumulated experience of ages) pertaining to their respective callings, and the after practice of their several theories? Most unquestionably. Was it not the book soldiers in the late civil war who gained the most distinction? Grant, Sherman, Hancock and Warren, on the Federal, Lee, Jackson, Pender, the Hills, and Stuart on the Confederate side, were all book soldiers, graduates of West Point. Experience, sound judgment, and energy to carry out your experience and your conclusions, constitute the practical and successful farmer; it matters not from whence he derived his information and his experience. Away, then, with this prejudice. Take one or more agricultural works, read them, see how other farmers talk with their pen, form your own conclusions, be a wise man, and let your prejudices vanish in thin air.

THE laborious and expensive manner of keeping up our lands by composting and the numerous fertilizers of commerce, leads us to call out suggestions as to a cheaper and quicker way of keeping up and improving our much taxed soil. Have you ever calculated, my energetic cotton planting friend, the expense of a ton of fertilizing material, when you have it ready to act as food for your crop? An application of 100 lbs. will cost you

not less than $6 per acre; 200 lbs. will be double that sum, and so on. Is this not "paying pretty dear for the whistle?" Does it in fact pay in the long run? The present price of cotton may justify this expensive manuring; but we cannot expect present prices to last many years, and it becomes every farmer and planter to husband the resources of his soil, and to get his land ready for the change that will surely come. To remedy our exhausting system of cropping we must invent, by experimenting and a free interchange of views, some plan of building up our lands in a more economical way than has yet been practiced.

We look to clover, (when the land is adapted to its growth) to oats, rye, and the field pea, as the chief renovating agents for this region of country. Go to work, farmers, and begin the good work. The first in this new field of enterprise will be the greatest reapers. The road is plain and simple—the result, in our judgment, does not admit of a doubt.

North Carolina State Fair.

From the following it may be seen that the worthy President, through the Executive Committee of the North Carolina Agricultural Society, has announced that there will be a State Fair held in Raleigh in October next.

The President very appropriately calls upon "all classes of citizens," of every pursuit, to co-operate in making this Fair an undoubted success.

We have not had a State Fair since the war commenced, consequently we recommend to our many readers the propriety of answering the call of the President, when he says, "the planters, farmers, gardeners, nurserymen, miners, mechanics, and all professional men," are interested in sustaining this Fair. We hope every section of the State, from centre to circumference, will be represented. Let none who have fair specimens of stock, &c., hold back upon the ground that their's will not compare favorably with others. We have every reason to believe the breeds of stock are better now in Eastern North Carolina than they were before the war, and we know a number of farming implements have been invented to save labor, which will add materially to the interest of the State. We are also satisfied from the amount of seed imported into the State, that various articles of production will show a considerable improvement.

Last, but not least, our wives, mothers and daughters, whose fortitude, perseverance and prudence has been taxed to such a degree ever since the war commenced, have specimens of the many articles they invented, and manufactured by their own hands, which, if carried to the Fair, would produce an agreeable surprise.

Therefore, let us take our wives and daughters to the Fair, with their many articles for exhibition, thereby forming a grand association of North Carolinians. Let us interchange sentiments upon that which will redound to the general interest of the Old North State.

We expect to be there, not only with a *carpet-bag* in hand, but with something for exhibition; and we hope to meet men of every pursuit and from every county in the State, with specimens of their own industry for exhibition; and we hope also to meet representatives from our sister States, with their labor-saving implements.

We are in favor of that reconstruction which will cause one cow to yield as much milk and butter as from two to five now produce, and that which will make hogs weigh as much at one year old as they

now do at two, and also for the use of reapers and mowers in place of the common cradle, for with these we can harvest our grain and hay in half the time and save it better. In short, we are in favor of everything that will make us a prosperous people:

STATE FAIR.

The Executive Committee of the North Carolina Agricultural Society take great pleasure in announcing to the people of the State that a Fair will be held in the city of Raleigh on the 19th, 20th, 21st, and 22d days of October next.

The grounds, which are being enclosed, will be increased in area and made to afford accommodations for an enlarged number of visitors, and a greater display of stock, goods, &c., and the track for the trial of speed will be extended to half a mile in length, and will be put in thorough order.

It is expected that the customary arrangements for transporting stock, &c., to and from the Fair, and for passengers, will be made with the various railroads of the State.

The committee will publish at an early day a list of premiums, which will embrace every department of agricultural, horticultural, and the mechanic and domestic arts.

The committee address themselves to all classes of citizens, whatever their pursuits, and earnestly invite their cooperation to make the coming Fair an undoubted success. Planters, farmers, gardeners, nurserymen, miners, manufacturers, mechanics, professional men, in a word, all are interested in reviving and sustaining the State Fair, and all should do what they can by sending articles for exhibition and by their personal presence to encourage the officers of the Agricultural Society in their efforts to promote through it the industrial interests of the State.

The purpose of the committee in making this announcement is that our citizens, having before them at this early day the fact that a Fair will be held, and knowing the exact time, may prepare for it by arranging their business arrangements so as to be present, and by getting ready for exhibition such things as they may desire to enter for competition.

KEMP P. BATTLE,
President.

Raleigh, July 6, 1869.

WE call attention of the agricultural community to the advertisement of J. B. HUNTER & Co., Portsmouth, Va.

A number of farmers in Edgecombe county used this lime on the present crop, and as far as we know, but one sentiment exists, and that is it pays well, especially when composted with a small quantity of ashes.

FOR the many kind notices of the press of this and other States, we beg to tender our heartfelt thanks, and hope by diligence in our calling, to merit a continuation of their highly appreciated favors.

A USEFUL TABLE.—To aid farmers in arriving at accuracy in estimating the amount of land in different fields under cultivation, the following table is given by an agricultural cotemporary:

5 yds.	wide by	968	yds. long,	1 acre.
10 yds.	wide by	484	yds. long,	1 acre.
20 yds.	wide by	242	yds. long,	1 acre.
40 yds.	wide by	121	yds. long,	1 acre.
80 yds.	wide by	60½	yds. long,	1 acre.
70 yds.	wide by	69½	yds. long,	1 acre.
60 feet	wide by	726	feet long,	1 acre.
110 feet	wide by	369	feet long,	1 acre.
120 feet	wide by	363	feet long,	1 acre.
220 feet	wide by	198	feet long,	1 acre.
240 feet	wide by	181½	feet long,	1 acre.
440 feet	wide by	99	feet long,	1 acre.

THE fact that bots are found in healthy horses when killed by accident, might only show what is generally understood to be true, that parasites often remain apparently inactive and harmless in ordinary states of the health of their victims; but in case of weakness, or fatigue, or fasting, or a cold, or other illness, they cause trouble and not unfrequently death.

Horticultural Department

Rev. J. B. CHESHIRE, D. D...Editor.

The Scuppernong Grape.

In the following article, from Mr. Louis Froelich, there is one suggestion which cannot be too urgently impressed upon the minds of those persons who intend to engage in the cultivation of the Scuppernong grape, and that is, the importance of studying the nature of this vine and striving to improve its qualities. We may consider it at present as only in its wild state; for though it has been raised among us for so many years, nothing has yet been done to improve it. We know that all the fine varieties of fruits are but developments of the wild kinds of the same order of plants, which through successive years have been experimented upon, and cultivated until they have attained their present perfection. The Scuppernong vine is but an accidental variety of the wild "bulbus" grape of the woods, and it is now in very much the same state in which it was first discovered. Whoever wants to raise a Scuppernong vine generally gets a layer from a neighbor, and plants it out, without any care, by the side of a stake; and after a few years they build a rude scaffold for it to run on, and then it is left to take its own way. The scaffold is not enlarged as the needs of the vine require; the branches, growing luxuriantly, are matted one above the other, many dying for want of light and air, and the fruit is so shaded that the grapes do not come to perfection, and drop off before their time, and neither vine nor grapes have a chance to develop themselves properly. That this grape is capable of improvement is seen in the fact, that in some localities the fruit is larger, sweeter, and of thinner skin than in others, even from plants raised from the same parent vine. There is no doubt, as Mr. Froelich suggests, that a careful attention to this grape, with a view to develop and improve its character, would make it the most abundant wine producer in the world. One great means towards this result is that the ground under the whole spread of the vine should be broken up carefully with a forked spade so as not to injure the roots, in the Fall of the year, and then covered several inches deep with rotten leaves and other vegetable mould from the woods, and sprinkled with a top-dressing of lime. On Roanoke Island, where the finest specimens of this vine used to grow, they make a large pen around the body of the vine and pit it twelve or eighteen inches deep with oyster shells. The gradual disintegration of the shells with the vegetable matter added continually by the decay of the fallen leaves, gives an extraordinary vigor of growth to the vines, some single ones sometimes covering almost an entire acre of ground with its luxuriant verdure.

—

From the Wilmington Journal.

SCUPPERNONG GRAPES AND WINE.

Kenansville, June 28, 1869.

Dear Journal: I am more and more convinced that our Scuppernong will become the standard grape of this section, and will be the source of great wealth and prosperity to our people. Each year's experiments prove more and more the value of this grape for wine making, and it must ultimately become the beverage of the country.

Below I send you the result of the analysis of samples of pure Scuppernong wine made without sugar or spirits. I sent three samples of wines, made from grapes gathered in September, October and November. The analyses are of the two first. The Chief Chemist of the Patent Office wrote me that the wine made from the grapes gathered in No-

vember could not yet be analyzed, that its great quantity of sugar had not fermented, and that he would not be surprised if this wine would show 20 per cent. of proof spirit, with a very fine flavor, and double the amount of spirit that a high priced Rhine wine contains. It will be seen from the statement below that the wine made from the grapes gathered in October has nearly twelve per cent. proof spirit, and all the ingredients necessary to make a fine wine.

I hope these facts will open the eyes of our people to the great value of the Scuppernong, and realize what a blessing they have in the perfection to which it grows in this climate. It is to be hoped that more general attention will be paid to its cultivation. Our people, however, must become familiar with the characteristics of the wine and its demands. If left neglected and uncared for, as is too often the case, we cannot expect good results to flow from the production of the Scuppernong. I hope soon to be able to send you some practical observations, gathered from my own experiments, upon the cultivation of this great grape.

Next month is the time for important work, if one wishes to raise his own plants. The sprouts of this year's growth from young vines must be put in the ground to take root. The smaller they are the better, it being no matter whether the bud is ripe or not, as it will ripen while it is lying in the ground. Old vines should never be used for raising plants. By following this rule I have been able to produce an entirely different grape, with a thinner skin, smaller seed, richer juice, and more grape sugar. The grape will hang on the vine until it is entirely ripe. I have followed this plan for the last four years. I took the sprouts from a vine which I planted in 1865, and planted them in 1866, and from that vine I raised layers for 1867, and so on to the present time. By this means I produce a much better grape. It loses its wild nature, and the branches are compact like bunch grapes. I am able to raise this year from two thousand to three thousand of these kinds of plants.

I hape this system will be adopted by our people generally, at least those who expect to go into the culture of the grape for a profit. By this means we will be enabled to make a fine, strong and healthy wine, without spirit or sugar, which will become the common beverage of the country, finding its way alike into the cellars of the rich and into the cabins of the poor, taking the place of the poisoned and intoxicating drinks now too freely used and destroying health and bringing with it poverty and crime.

We can raise with less labor and expense two thousand gallons of wine to the acre than we can one bale of cotton, and with much more certainty. At twenty cents a gallon we have almost quadruple the profit derived from cotton at twenty-five or thirty cents per pound. It seems to me that these facts would impress themselves upon the attention of the farmer, and cause him to turn his attention to this important subject. Below is the result of the chemical examination of the samples of wine sent to the Department of Agriculture.

Very truly,

LOUIS FROELICH.

WASHINGTON, D. C., June 8, '69.

Hon. Horace Capron, Commissioner, Sir :—I have the honor to communicate the following return of a chemical examination of two wines made from the Scuppernong grape by Louis Froelich, Esq.:

No. 1—Made from Grapes gathered in October, 1868.

Absolute Alcohol, by weight	5:20	per cent, or
Proof spirit (after sikes)	11:38	"
Acid calculated as dry tartaric	1:9 3:0	"
Cane sugar	traces.	
Grape sugar	1:7	"
Specific gravity, 995; Extract, 1:84 per cent.; Ash	0:109	"

No. 2—Made from Grapes gathered in September, 1868.

Absolute Alcohol, by weight	4:45	per cent. or
Proof spirit (after sikes)	9:75	"
Acid calculated as dry tartaric	0:89	"
Sugar, total	23	"
Extract	221	"
Ash	0:19	"
Specific gravity	999	"

No. 1 is thus seen to present a somewhat higher per cent of alcohol than No. 2; a greater acidity, a less amount of sugar, and a smaller extractive. No. 2 is sweeter, and consequently richer in extractive matter, while its acid is neither so perceptible to the taste or to reagents.

These wines may be regarded as corresponding in some particulars to the

light acid wines of Continental Europe. Their proportion of alcohol is greater than in most of the Rhine wines, but in other respects I can pronounce them excellent wines of their class.

I remain, sir, very respectfully,

THOMAS ANTISELL, M. D.,
Chemist.

[From The Horticulturist.]

Scaffold Training for Grape Vines.

That a perfect method of training grape vines has not yet been universally adopted will be conceded, and may not be for years. In our search for that best method, why should we follow the same old paths, when those who have gone before only report failure? It seems the true way must soon be found; for all the false ones have been threaded to their ends, and new ways have been tried until there are no more new ways.

"Where is the true way, then, if all the old ones are false, and there are no new ones?"

Not so fast. I did not say all the old ways are false, but that all the false ways had been proved false, and there were no more new ones to try.

"Let's hear, then, your perfect method at once."

Go with me into the forests, and when we study nature awhile, and determine from her examples the best mode, it will be *our* plan, *not mine*, and you will not feel yourself called upon to oppose it.

"But do you mean to assert that we must abandon our vines as they are in the forest?"

Calmly. Nature always does exactly right; when surrounded by the most favorable circumstances, the most favorable results follow; the vines in the forests do the very best they can, *under the circumstances*. Art, culture, can change these circumstances, but the results are *natural* results after all! and art, not nature, is to blame if such results are not satisfactory. "Admitted." Well, now to our lessons. Look at that gigantic wild vine. For several feet it lies along the ground, makes one loose coil around the immense trunk that supports it, then hangs along and does not touch again until where the great limbs leave the body. It looks like a great cable, and you wonder how it ever got up there. "You do not advise all that naken wood, and the immense hight of the fruit from *terra firma*, do you? And could we get at the fruit, through great risk of life and limb, 'twould only be sour grapes at last." Patience! these are but the adverse circumstances I spoke of. The superior flavor of the fruit of your sickly hot-house pets is the natural result of the careful culture their parents for many generations have received. But I would call your attention particularly to the beautiful display of fruit on that branch over our heads. The limbs and twigs of this branch spread out like a fag, so that its leaves enjoy equal advantages of sunlight and heat. Taking advantage of this support, the vine has covered every part of it, spreading its leaves to the sun in the same way, while all the clusters hang down between the network of twigs and the sheltering leaves. This is the lesson we should learn. If nature had intended that the fruit should be exposed to the sun, then the clusters would have been on the top of the bough instead of sheltering so securely beneath its canopy. Now, what old mode of training does this most resemble? Of course, it is nothing like stake training, nor any of the modifications of trellis training, but the good old-fashioned arbor or seaffold training. "But you surely do not claim scaffold training as a perfect mode?" No, or I contradict myself; for I said there is as yet no perfect mode known; but I do believe it is the right path in which to go on looking for the perfect way And if viticulturists, bringing all the knowledge they possess, will "fight it out on this line, it will not "take all summer" to reach the end they have so long sought. I believe in following nature much more closely, especially propagation. Plant seed of healty, vigorous varieties for stocks, and graft the proved varieties on them, just as you would fruit-trees, using a *whole seedling*. I believe the cheap and rapid propagation, by cuttings and layers, is a great cause of disease in the vine. Our best pomologists assert that rot in apples is caused by grafting on pieces of roots, and I believe that pear-

blight is caused by grafting on rooted cuttings, suckers, and pieces of roots of quince and pear. (See article on "Causes of Blight in Pear-Trees," in June number of *Southern Cultivator*, Athens, Ga.) Another cause of disease in the vine is the barbarous system of pruning, almost universal. Though the fruit is borne on growth of present season from that of last, that is no reason why you should prune away all old wood, keeping the vine the size of a two-year old, though it be ten years old. Peaches are borne only on growth of last year. Why do you not set your orchard 4x4 feet, and adopt an "alternate *sprout*" system, reducing the old wood to a mere stump? If the "sprouts" grow so fast, and so much out of shape, as to be in danger from winds, stake them, or train to a wire trellis, and you have peach culture reduced to the same scientific absurdity that the grape culture of to-day presents.

A correspondent in the August number of the *Horticulturist* says, "I am getting a great quantity of foliage," etc.; he wants the sanction of art before he does something that nature tells him is not right. As a vine grows older, it insists in stronger terms on being allowed to run; and had I that "great quantity of foliage" I should "let it run," and see to it that it had plenty of room, and something to run on. On a perpendicular trellis, with close planting and severe pruning, the vine is in its most unnatural position, except when flat on the ground. Again, the natural tendency of a young vine is to run up perpendicularly, and of a bearing vine, to spread out horizontally, which natural desire is gratified by the support of the horizontal scaffold.

To recapitulate: To give a vine the greatest natural advantages and insure the most satisfactory results:

First. Graft it upon an entire, healthy, seedling stock.

Second. Give it plenty of room to spread its roots in a good soil, and its branches in the sunlight.

Third. Train upon a horizontal support or scaffold, allowing the young growth to run freely during the growing season. Early in the fall, prune canes to from three to six eyes according to position on scaffold, etc.

Undetermined. The best mode of cultivation; and whether, in vineyard culture, it is advisable to cover the entire surface with scaffolds and vines, or to plant in strips, with intervening strips planted in low-hoed crops. On ground level, or nearly so, I think the latter plan is advisable, while on steep-terraced hillsides, the soil will get plenty of sunlight and warmth by the former method.

MERIDIAN, MISS. F. W. V.

To Expel the Currant Worm.

We find no difficulty in keeping down this worm, if we only take the time for it. A solution of copperas is very effective. The following is also excellent: Put six pounds of whale-oil soap (at one cent a pound) into a barrel, and add rain water enough to make thirty-two gallons. This will make a solution just strong enough to kill the worms and yet not injure the foliage—a point not very easily attained.

Apply this once a day, either at night or morning, using a common watering-pot, or, better, a garden syringe made with an up-turned nose. Repeat the application once in three days. The second syringing will be quite sure to destroy them. If a second brood appears, they must be treated in the same way. It is a recommendation of this soap wash that the dippings enrich the ground for the benefit of the currant bushes.

FRUIT GARDEN.—Every one who has land enough should have a separate enclosure for fruit. In a mixed garden, where vegetables and fruit are grown together, neither can be grown to the best advantage. The land should be drained, if at all disposed to be wet, and the soil deep, well worked, and of moderate richness. Care should be taken to protect the trees, etc., from injury.

MULCH FOR ROSES.—The best mulch is half-rotten dung — decidedly better than in a state of fermentation. Spread it two inches deep.

KEEP the trunks and leaves of fruit-trees clean.

Cultivation of the Raspberry.

BY THE EDITOR.

Next to the grape, there is probably none of the small fruits that require such good judgment in choice of varieties, soil, and method of cultivation as the raspberry. And yet there is no fruit which, if well cared for, gives such a genuine pleasure to the horticulturist, as a fine, luxuriant row of healthy raspberry plants, their deep green leaves glistening in the sun, or hiding in each other's shade, graced with the long, pendent stems of beautiful fruit of vari-colored hues. Both as a market and as a family fruit, there can hardly be any thing more choice or delicious. City visitors to the gardens of their country friends have been accustomed to the sight of strawberry-beds, and rows of blackberries, or apple and pear-trees here and there; but when they discover by the side of the fence a row of raspberries, the berries large, round, plump, with such beautiful colors of orange, or white or scarlet, and when the delicious taste justifies the expectations of their eyes, nothing can excel their admiration. Their praises we think are well bestowed. The raspberry *is*, without doubt, the choicest family and garden fruit now grown. The raspberry is easily grown if the right kind and the right soil are selected; but how difficult it is to make a right choice! The Hudson river Antwerp may be desirable to grow, by any one throughout the country; and yet out of the latitude of the Hudson river the instances of success are so few as to scarcely deserve notice. The Brinckle's orange, or Fastolff, or Franconia may seem desirable, and splendid berries they are if successful; but if the soil is sandy and burns them up, or if their canes are not protected during winter, the cultivator may look long for that delightful crop he expects, and never see it. The fact is, that raspberries can not be grown in any place under the sun without a good, *rich, moist soil.* The purple cane and red raspberries particularly need a good rich soil; the black-caps may be grown on sandy loam and produce fair crops, but a richer soil will fully double the produce. Sandy, gravelly soils invariably need frequent and abundant manuring. Deepening the soil and frequent cultivation, too, are requisite; lastly, *mulching.* Perhaps no part of the culture of this fruit is so important and has so great an influence on the success of the crop as a careful mulching. This supplies moisture—moisture is a partial fertilizer; all combined give to the plant the right elements of growth, and cause it to attain a vigor and luxuriance it might long look for in other ways. The experiment was tried last season at the Wallingford Community, Ct., as to the comparative benefits of mulching or not; and it was found that the produce from the *mulched* portion exceeded three fold that of the other not so treated. Mulching should be applied invariably during the fruiting season. It can afterward be removed, the ground carefully cultivated, and then replaced for fall or winter protection. The *distances* for planting are unimportant. For market uses we would prefer rows 4 to 5 feet apart and 3 feet in the row, carefully trained to stakes. With the black-caps, a trellis will be found advisable, as their long stems are often unmanageable and in the way. It pays to treat even black-caps well. We saw last season two different systems of cultivation—one in the field, the other in the garden. The first was not manured, the second was richly. The first hardly yielded 15 bushels per acre, the second yielded a bushel from only one trellis *ten feet* long. The growth and production were simply astonishing.

If the soil is rich and heavy enough to admit of a relief from the expensive process of mulching, then resort must be had to good cultivation, keeping the soil mellow and free from weeds. Keep the plant well pruned by cutting out all the old wood, and also all young and weak shoots that can be spared. The height of the red and purple cane raspberries should be 3½ to 4 feet. As to time of planting, we have always preferred the fall; for the best of reasons, that the plants gain a growth the next season fully fifty per cent. over those planted in the spring, Black-caps must invariably be planted in the fall, as they are earlier in their growth than any other variety. The profits of raspberry culture are yet undetermined, rarely or never exceeding $500

per acre. Their culture is not so widely extended as to allow much opportunity for examination of this point, but the prices per quart obtained are certainly very remunerative. If a grower obtains $250 to $350 per acre for any of his raspberry crops he can be contented. Instances of $1,000 per acre from new kinds are quoted, but the people generally never attain such figures. A fair rule in fruit-culture is to treat your fruits as well as your children and yourself, and it will not be necessary to make estimates, for the profits will come easily and be well used. Lucky is that fruit-grower who treats his vines well.—*The Horticulturist.*

Onions.

We know not whence is the source of this excellent selection, yet we know it contains information no less true and practical than interesting:

I place onions at the very top of the list of *large* family edibles. These bulbs are not only healthy, and nutritive, but absolutely medicinal. I have known inveterate dyspepsia cured by the use of raw onions as a daily tonic, and on philosophical principles. They have the same exciting influence on the coats of the stomach that they have on the eyes, calling out gastric juice as freely as they do tears from the visual organs. For poultices they are invaluable.

Onions are multiplied, as all know, by various methods. In this climate, by sowing little black seed very early, they can be raised large enough the first year for table use; these are called rare-ripe. But it is usual to pull the product of these little seed, dry them for sets, and plant them in the fall or the ensuing spring. The top onion is a sure dependence for a general crop. In this climate any onions will grow, but the red and silver-skinned are better keepers, and the last generally attains the finest size. Strong ground, shallow planting, and clean culture insure success. But the most valuable fact I have learned concerning onions is that, like potatoes, you may eat and then plant them.

I had a hardy variety called Welsh onions. The tops and bottoms being trimmed off in preparing for use, were thrown on a compost heap. One day a child brought me some of these bottoms to show me that the onions I had thrown away were growing again. I took several bunches of these bottoms to the garden, set them out, and they grew as thriftily as if they had been perfect offsets from the old row. Taking the hint, I cut off the bottoms of other varieties, pieces as large as a silver twenty-five cent piece, with the fibrous roots attached, and set them out. They also sprouted, and being satisfied they would grow, I allowed the thorns of other cares to choke them out of my memory, and so I cannot say what sized bulb they would have produced, but record this for the benefit of persons with small gardens, who will be at pains to plant the bottoms of their onions as fast as they use them; thus enjoying two crops from the same piece of ground and same seed in one year.

Longevity of Pear Trees.

That the pear tree is not necessarily short-lived, one might infer from the numerous old trees found hale and hearty in every part of the land. We lately saw near Detroit and Monroe, in Michigan, pear trees which were known to be a century old; they were as large as maple trees, and bore fruit plentifully in their old age.

Does it not seem probable that in the propagation and training of our pear trees, we somewhat go "against nature." Do we not amputate limbs, and bruise the bark, and perhaps over stimulate the roots so ruthlessly as to give the tree a shock from which it can hardly recover? If we are always careful to choose good stocks, and to graft healthy varieties upon them, and then to guard them from all injuries, we might expect them to live and flourish as long at least as the hand which planted them. Why not?

USEFUL HINTS.—A bit of glue dissolved in skim milk will restore crape.

Ribbons of every kind should be washed in cold suds and rinsed.

If your flat irons are rough rub them with fine salt and it will make them perfectly smooth.

The Poultry Yard.

Breaking Hens Wishing to Sit.

Editors Country Gentleman—Many persons, when troubled with a hen wanting to sit, make use of ways to break her that, to say the least, are very inhuman. One way is to stick a feather through the hen's nostrils and let her go about with it; this gives her great pain, and will eventually break her, but no person that has the least spark of humanity would make use of such a remedy.—Another abominable plan is to souse the hen in a vessel of cold water, thereby nearly drowning the poor creature. I have seen this tried, but never successfully, unless she was so thoroughly soused as not to be able to get to her nest. Another remedy is to throw the subject up into the air three times; this is very foolish, and nothing more, for any one who knows anything whatever about sitting hens knows how tenaciously most of them stick to their nests, and that all this can possibly do is to give the hen three terrible scares, and as soon as she gets over them, off to her nest again post haste.

Another plan is to place the hen in a pan containing about three inches of water, cover her up, and let stand about twelve hours, or I believe some say twenty-four; this is another remedy used only by thoughtless, unfeeling persons. Another still is to tie her by the leg in a place frequently passed, and to give her a good scare every time. This I do not think is the thing either, for when startled she of course pulls hard on the string, which rubs and cuts her leg; it may in time cure her, but I have never tried it—nor do I intend to. Why not make use of more gentle remedies, such as giving two or three doses of jalap or putting in a coop and feeding sparingly until she is broken, and spare the poor thing? It is not her fault that she is so obstinate, but the nature implanted in her by our Creator.

Lewis Hooff, Jr.

Fairfax Co., Va.

Ducks, as a general thing, can be easily reared—in fact, require less care than other aquatic birds.

How to Raise Turkeys.

At present prices poultry raising is a very pleasant as well as remunerative employment, and, besides, is much more agreeable and less laborious than the making of butter and cheese. We know of a lady who in one year, made over $100 with her poultry and dried fruit, and this too without materially interfering with her ordinary housework.

The first thing necessary to insure success, in raising turkeys, is to select a good kind. Keep them well—make pets of them if you like. Mine eat from my hand and answer to my call. A few days before they begin to lay, place them in a temporary enclosure till they have made their nests, then there is little or no danger of their straying. Next, take good care of the eggs. One year I set thirty eggs and raised but one turkey. The next year I took care of the eggs, and out of forty, thirty-nine hatched, and all lived but one. The eggs should be handled very carefully, placed between layers of cotton or flannel, in a cool place of uniform temperature, and turned over at least every other day. If hens are required to hatch them, place a few hens' eggs under the hen after she has set a week; then they will not disown the young turkeys as they sometimes will when they are about as large as quails.

Feed the young turkeys with bread and milk a few days, then with curd made from loppered milk or butter milk—into which stir a little canaille, or corn meal while it is hot.—*A Farmer's Wife, in The Household.*

If a mulching is employed at the time of planting trees, they will never need watering. Uniform temperature and a constant supply of moisture are the prime elements of success in fruit culture. Mulching enables us to accomplish this. Mulching acts beneficially in other ways. It prevents to a great degree the cracking of fruit and causes those varieties which are generally spotted and defaced, to become clean and covered with a rich bloom.—*Horticulturist.*

Half a cranberry, it is said, bound on a corn will soon kill it.

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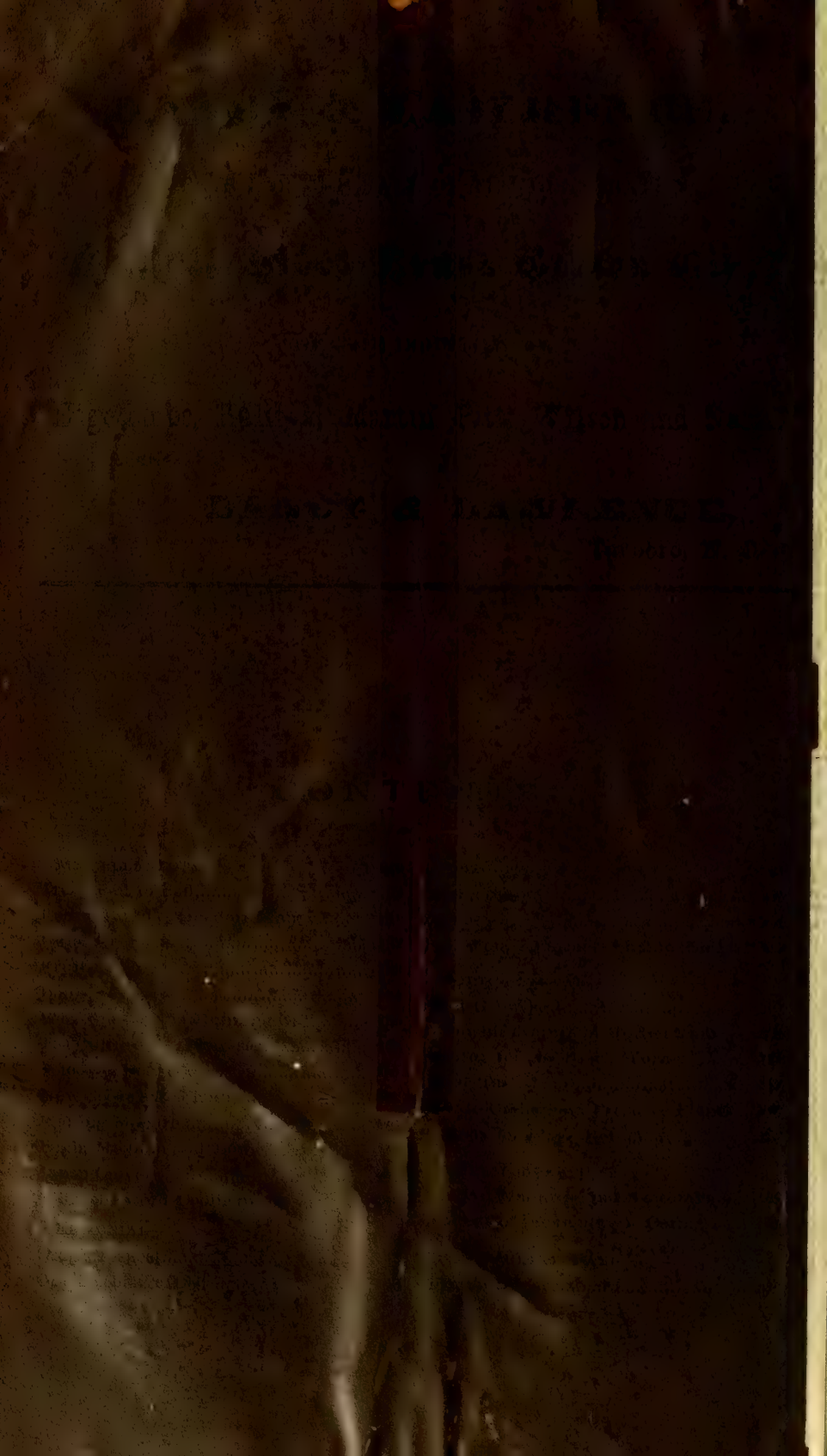

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VOL. 1.] TARBORO', N. C., SEPTEMBER, 1869. [No. 5.

[From the Prairie Farmer.]

Treatment of Sod by Best Farmers.

A SUCCESS—HOW TO SECURE.

First the sod. This is done by seeding to clover and timothy. The crop selected is wheat, barley or oats—wheat the best, and that winter wheat sowed on the spring snows; barley or spring wheat next, and oats the last.

Clover is the first crop; clover and timothy the second; and timothy mostly in the succeeding crops, either as meadow or pasture, or both. More or less of the native grasses and white clover show after the disappearance of the clover. Thus a lot is kept in sod from five to eight, and sometimes ten or more years; in a few cases less, depending upon the soil and the treatment of it. In undrained land clover lasts but its two years, and sometimes the timothy is lifted, for the frost upon such land has serious effect, especially where clay abounds. Draining (thorough draining) always remedies this.

Thus the land is wonderfully improved by this process. The clover is sure to enrich it, and sure to mellow it—mellow it for the grass which accompanies and follows it; it is almost equivalent to tillage; hence the grasses grow better for the clover. Our heaviest crops of hay are in this way secured—that is, of grass proper. More clover during the season can be raised in the two crops, which the medium clover will readily admit; but that is the end of the clover in the main. It is seldom that more than one crop (of one or more cuttings) can be raised. The grass then comes in, crowds in; if the clover still remains, in a measure, this makes the thick-set and the heavy crop.

Plaster is always used with clover, and with a benefit that ranges from half to a double growth. Plaster frequently doubles the crop, as has often been tested; so ashes are of great importance. The difficulty is to procure them. On grass proper they are better than plaster, and rival the phosphates and the guanos.

A sod six years old is expected to have had one or two coatings of manure from the barn-yard or the compost heap. This wonderfully thickens the turf. Some of the strength of this manure finds its way to the lower roots, if the soil is somewhat sandy or leaky, thus enriching it throughout. This, with the effect of the roots of the clover—which is always present, as clover is invariably sowed in seeding—prepares the soil for deep tillage.

This sod is inverted. The soil, instead of being raw or impoverished, as it was more or less at seeding, has, as we have shown, been greatly enriched, so that the corn which is planted (and it is a principal crop upon sod here) needs little more than planting, and that following the plow—indeed, planting it the same day.

Sometimes manure is added in the hill. This is necessary where there is a stiff clay. The manure expedites the growth in the start, when most needed. Hog manure, or better a compost of hog manure and some other material, which should have been mixed with it in the pen. This will make it comparatively dry and pleasant to handle.

Weeds bother but little on sod, and if the cultivator is kept constantly going, both weeds and drouth are overcome, and fertility is added. It is held by some that sufficient fertility is added by continuously stirring the soil to pay for the labor. It must be recollected that this (manure) is clear gain from the atmosphere.

If the ground is decently dry, a good crop of corn is expected, say thirty to forty bushels (shelled corn). If the season is favorable—showery and warm—ten bushels or more may be added. This on soil ordinarily good, or originally less so, but improved by growing. Of course, if the soil is richer and better drained, there will be a heavier crop; and in a rich and thoroughly drained soil, there will be a maximum quantity of eighty bushels, more or less: this in a favorable year; and in the most favorable it is sometimes carried to ninety and even one hundred bushels.

On the two last-named soils there is never a failure, unless it is by the frost, and that very seldom. A rich soil, well drained, with an old sod turned down, never fails of a remunerative crop of corn. It is as reliable as anything in farming can be.

The next year there is your land for another crop—almost anything you wish—barley, the best and a general crop, though less so latterly. This year we see it more again than usual; and nothing is finer than these corn fields of barley. They surpass the oat fields. If you look at the bottom, the ground is covered with young clover and the fine, hair-like timothy that can hardly be seen; but the barley has a conservative influence, and it will bring it out all right. It now pretects it; gives it shade, so that the hot sun reaches it not. When this (barley) is mown, there will be a dense under growth, the clover almost alone showing. This will start at once, having already the ground partly in possession, and thus protecting itself. If there is a drouth, by all means now apply plaster, or plaster and ashes, or ashes abundantly alone, for in an abundance of ashes there is always sufficient plaster to answer the purpose of that agent. In this way the crop can be saved, as the ashes and plaster attract moisture, and in connection with the shading of the ground and stubble (which is a non-attractor of heat), the drouth must be severe, indeed, if it even seriously hurts the young growth; it cannot destroy it. But this is somewhat depending upon another thing. If the crop is put in early, or the seeding is made on the snow—even in winter (in February), as we have known it with success—there can be no failure. If the grain—winter wheat or spring grain—has been harrowed in with manure, and a good coat given it at that, there is not only no failure of the seeding in a drouth, but a good success—a fair, remunerating success in the worst cases. This we have seen demonstrated here in the hottest seasons, in the greatest drouths, on our dry sandy plains. It was the rains of the spring—early spring—and the manure that did it. These started the seeding, and stimulated it so that, protected by the manure, it got a footing. The grain, also benefitted by the manure, shaded it, and after it was removed the full growth was given to the young plant, still protected, and if aided by plaster or ashes, the growth was continued; and the fall found a good stand of young clover. *This stand must be let alone;* it mnst be permitted to protect itself. And the fertility of the clover, though it seems to be little, the plant being so frail, is yet of importance. This same growth, rotted down, will re-appear in the crop, and that is from one-fourth to one-third in amount. Is this nothing? It is important. In no case feed down this young growth. It will also be a protection against winter. Not only new seeding, but all after-growths of grass or clover are here, by our best farmers, respected and permitted to stand. It needs but testing to establish this practice.

Corn and barley bave thus far been our crops, and they have been good ones.

You cannot well exceed the barley treated in this way. It will be bright, uniform, and clean. The corn crop can be increased by the addition of manure, or by an after-growth of sod. A sheep pasture, for instance, of ten or twelve years' standing, will give you, with decent soil, a maximum crop. So will an old sod, where the clover has well kept in—has partially renewed itself by self-seeding, as is the case where it is permitted to head.

Many farmers (here) make the second or barley crop the crop for seeding. This is done where dairying is followed, thus answering always too good crops (of grain); a good condition for grass—which needs this, above all the grains, as there is no cultivating after, the ground all the while compacting save the first year or two, when the clover is doing its work.

In this way, not only the grain crops, but the grass also, including especially the clover, will be abundant. But sometimes other crops follow—oats after barley, or oats after corn instead of barley, the second crop being also oats. But this rapidly exhausts the land without manure, and the seeding (to grass and clover) is uncertain: oats are a grass-killer, hence, like buckwheat, hard upon seeding.

This is usually the rotation—grass and the two or three crops of grain. Sometimes winter wheat follows a crop of peas—and it seems an excellent plan, enriching and mellowing the land—summer fallowing it. Now and then wheat follows barley. Little wheat, however, is sown, and that mostly spring wheat.

Stock, the dairy, these are the order. Hence the use of sod. And this use has led to discoveries. It has discovered to us that sod is one of the best means of manuring—indeed, *the* best, generally speaking; for this sod obtains its wealth mostly from the atmostphere, and needs not be saved and carted on the field. It is the means of manuring the land here. It is the successful means—only thoroughly so, however, with the use of clover in connection.

The country is improved wonderfully. The land is better, and in many places much better than the original soil was. And yet it has cropped for near a century, the last twenty to thirty years being employed in graining and raising clover—raising it for seed to a large extent, so much so that the Herkimer county seed was as noted as its cheese now is. Since the dairying era commenced the land has been improving, and all along it has been paying better than raising grain; and this with less labor. Sod has done it. F. G.

Herkimer county, N. Y.

Letter from Commodore Maury.

"LEXINGTON, VA., July 10, 1869.

"*G. W. Gift, Esq.:*

"Dear Sir,—Your letter of the 5th reached me this morning too late, owing to our mail connections, for my reply to reach you in time for our meeting of the 13th.

"Chinese labor is much more intelligent, skillful, and effective than negro labor, and I consider the introduction of it, under proper regulations, would be highly beneficial to the South.

"After Jamaica, Trinidad is the largest of the British West India Islands, and that it did not pine and dwindle as Jamaica has done, is, I am assured by residents there, chiefly owing to the introduction of coolie labor.

"Kindly and properly treated, the Chinese are the most faithful creatures in the world. I have been in the country, and have paid some attention to their traits of character. As domestics and laborers, gardeners, and cultivors of the soil generally, they are not surpassed by any other people. From the first that arrive I should like to have a cook and two house servants. Please let me know how to proceed in order to get good ones, and oblige

"Yonrs, truly,

"M. F. MAURY."

An uninjured whiskey bottle was the only thing capable of identification about a poor fellow who was run over on an Ohio railroad the other day.

The apple crop in some of the northern States promises to be unusually abundant.

[From the Rural American.]

Rules for Farmers.

As a large portion of the farmers of this country do not appear to desire to lay up much money, judging from the manner in which they conduct their business, we propose occasionally to lay down a few rules to enable them to remain in "straightened" circumstances through life. We like to publish something to suit all tastes and interests, consequently what we have to say to the above class of farmers, will undoubtedly be read with profit by them.

1st. Keep as few farm utensils as possible, and those of the poorest kind. You probably have obliging neighbors, who will lend you the better kind of implements when needed; and then if broken if your hands, you can say they were so when received, or that there was some "flaw" in them, and that they would have broken any way very soon. By a little "sharp" management in this way you can get rid of the expense of repairing borrowed tools nine cases out of ten. It is not necessary to return a borrowed implement when you agree to return it, nor should you take the same care of it that you would if it were your own. You may, perhaps, have some trouble after a while in being able to borrow what you need; but you can send your hired man to as many places as you please, and the time lost will be of little account.

2d. Do not rack your brains to provide work in advance for yourself and hands on rainy days; but rather follow the good old rule as laid down in the Bible, "*take no forethought for the morrow*," &c. It is also written that "sufficient unto the day is the evil thereof"; consequently, take the world easy, and, let it rain or shine, you will get your daily bread in some way. Some simple-minded farmers will leave broken tools to be repaired on rainy days; and they even spend considerable money in preparing a workshop, with planes, saws, files, drawing-knives, &c., &c., so as to be able to repair almost anything on the farm that gets out of order; but do these men live out half their days? To work when it is fair weather is bad enough; but to toil in rainy weather is intolerable.

3d. In haying-time your neighbors, probably, who read agricultural papers will have mowing-machines, tedders to spread their hay, horse-rakes to gather it; and patent pitching apparatus to unload it from the wagon. You, of course, will know better than to incur so great an expense. Go right on as your fathers before you did; and if your "stuck-up" neighbors laugh at you, let them laugh. You can laugh, too, when one of them falls off his machine and gets cut in two, or impaled on a tine of his patent pitchfork! The new-fangled farm machines of the day will be the death, probably, of half the farmers who use them.

4th. In regard to paying your debts, your need not trouble yourself about that *till you are sued*; but then you had better pay up, if you can raise the money. You can make every possible "shift" to get rid of paying a debt till the *lawyers* get hold of it. Never pay for an article that you can get trusted for, because if your *credit* is good, you can manage to live in some way, and trust to Providence when pay day comes. If you owe borrowed money, it is a good way to pay it by borrowing the amount from somebody else; and if you manage to owe a thousand or two dollars by borrowing sums of A, B, C, &c., it will be so much capital in your business, without costing any *interest*, provided you can borrow of D to pay A, and so keep the amount owing undiminished.

5th. Never be so unwise as to drive your *work*; but let your work drive *you*. That is the great secret that enables all the poor farmers of this country to live free of the cares of the rich. Depend upon it, the wakeful hours that some men have in thinking how they shall invest their surplus funds, or imagine that the bonds they owe are going to depreciate, is truly awful; and you may thank your stars that you are exempt from these troubles.

The farmer must practice one of three methods to keep vegetable mold in his fields—use a great deal of straw and other vegetable refuse in his stock-yards; haul many loads of swamp muck; or plow in clover once in three or four years. The last way is the best.

[From the Northwestern Farmer.]

Fruit for Food.

We give below some copious extracts from Dr. Holbrook's address on the above subject, which will be read with great interest and profit, doubtless, by our readers:

The subject of food is one which has a very important bearing upon human health and happiness. It has generally been discussed by our physiologists and chemists from a chemical, and not from a physiological point of view; and from this standpoint everything is reduced to a mathematical problem, rather than to a vital question.

The chemist will with his retort and chemicals tell us just how much nourishment there is in a pound of bread or a bunch of grapes, for he has weighed them in his balances. The physiologist has hitherto accepted his chemical statements because he has none of his own to offer, and it was hard to get a data from which to form a new statement, and because it seemed reasonable. If we were to take this estimate of food in discussing the value of fruit as an aliment, we should make a very great mistake, for the chemist tells us that a pound of beans, wheat, or rice, contains from eighty to ninety per cent of nutriment, while he passes over the luscious peach by saying that it is *slightly nutritious;* and yet I presume there are few persons present who would take this statement as containing all the truth. I think the truth will be found to be that each article of food has its own special value for each individual, modified, of course, by circumstances. For instance, I think there are times when a pound of grapes, an apple, or a peach, is worth more than its weight in beans, rice, or wheat—not because they have more nourishment, but because they satisfy a want of the system; and I will say that I believe any article of food is valuable to the eater in proportion as he needs it, and that bread is most valuable when he needs it most, and fruit more valuable than bread when it is most needed to fill some want in the wonderful and curious structure of the human body. The few insignificant hints which have gradually led me to this conclusion may be briefly stated. [The Doctor then related a number of instances where patients have been entirely restored to health by the free use of fruit. Even the fever and ague had yielded to this remedy.]

The best of fruit in this season keeps the blood cool and prevents ferverishness. The juices of fruits dilute the blood and keep it in a proper condition of fluidity, quite as well, if not better, than water. They also keep the kidneys in a high degree of health, a recommendation that cannot be given to any sort of artificial drink, not even to water, except it be pure and soft.

Indeed, I am inclined to the opinion that in those districts of the country where the water is bad, if people would substitute the pure unfermented juice of the best fruits for water, they would escape a multitude of diseases with which they are now afflicted, and it is a curious fact that in such districts fruit generally thrives well. So again the use of perfectly ripe fruit has a most favorable influence on the bowels. I know poor fruit, such as is sold in our New York markets from the wagons of city venders at reduced rates because it is stale, is very unwholesome, and may, and often does, cause cholera and other diseases; but good fruit never does this, and even in a cholera season the moderate use of good ripe fruit is a better preventative of cholera than most of the medicines given by doctors to keep this disease at bay. If the alimentary canal is perfectly healthy and unclogged by constipating food, those diseases which sweep over the world like cholera, sweeping off those who are not physiologically righteous, would not be known, nor would our children in large cities rot off by thousands with cholera infantum as now. There is no greater disgrace to our civilization than that we sit easy under the crime of allowing thousands of helpless children to die in New York city when pure air, plenty of soap and water, and more fruit in their diet, would save them to age and usefulness. There is one other value in fruit which I cannot pass over in this connection without notice. One of the common diseases of children is worms in the bowels. If a child's digestion becomes impaired and the gastric juices

becomes weakened or defective in quantity by over-eating or bad food, the whole alimentary canal becomes clogged up and filthy, and furnishes a nest for such worms as will breed there. In this weakened condition of the system they cannot be destroyed by the process of digestion, and hence great harm comes from them. Now, it is an interesting fact, that fresh ripe fruit is the best preventive for this state of things. Dr. Benjamin Rush pointed this out a hundred years ago. He made a series of experiments on earth worms, which he regarded as more nearly allied to those that infest the bowels of children than any other, with a view to test their power of retaining life under the influence of various substances that might be used as worm medicines. The results proved that worms often lived longer in those substances known as poisonous than in some of the most harmless articles of food. For instance, in watery solutions of opium they lived eleven minutes; in infusion of pink rook, thirty-three minutes; in claret wine, ten minutes; but in the juice of red cherries they died in six minutes; black cherries in five minutes; red currants in three minutes; gooseberries in four minutes; whortleberries in seven minutes; and raspberries in five minutes.

From these experiments Dr. Rush argued that fresh ripe fruits, of which children are very fond, are the most speedy and effectual poisons for worms. In practice this theory has proved to be correct.

If we eat and drink hot and exciting materials, the blood becomes inflamed, the nerves exasperated, and the brain sends out thoughts that are base and mean. If we would do away with those foods that only influence the passions, and substitute more fruit in their place, we would need less restraint on wrong-doers, for our heads would be clearer, our blood cooler, our nerves steadier, our impulses more subject to reason, and life would be a hundred per cent. better and truer than it is to-day.

Castor beans are to be extensively cultivated in California, as the bring over $150 to the acre.

Baulky Horses.

When the horse baulks in harness it is not from any unwillingness to perform his duty, but from some confusion or excitement arising from mismanagement. He is willing and anxious to go, but too eager or high spirited to make the steady push against the collar necessary to move the load. The usual plan is to commence to curse and lash.

A volume might be written on the importance of keeping cool on all such occasions. Frequently, just going to their heads and moving them gently against their collars to the right and left evenly, giving them time to get cool, and they will start of their own accord. Sometimes taking up one fore foot in your hand, and giving the horse a sharp press against the shoulder, to one side, will cause him to step, and start him. But if the habit is firmly fixed, you will have to resort to the following means, which will take a few lessons, and then you break up the habit:

Take your baulky horse in the barn or on a piece of green sward; take him by the head and tail and whirl him around until he is quite dizzy, and if you become dizzy before he does, let him whirl himself, as follows: Tie the hair of the tail into a hard knot; then take the halter strap in your left hand, holding the tail in your right, pass the halter strap through the hair, above the knot, and draw up as short as the horse will bear without running around, tying quickly. This will bring the horse in the form of a half circle—his head fast to his tail by the halter strap.

Your object is to break up his confidence in himself; and nothing on earth, no process you can subject them to, will do it half so soon as this. Should he not run around freely, touch him behind with the whip, which will cause him to move sharply. Simply keeping him moving until he falls down by becoming dizzy, which he will do inside of a minute and a half. Let him lie a few minutes; then tie him in the opposite direction, and put him through until he falls, or is unable to move. Then put on your war bridle and give him a few sharp jerks to the right and left, and show him you can handle him by the head as well as by

the tail; and train him until he can spring to the right and left and straight forward, when you ask him—and then you are in a shape to put him to harness.

If he refuses to draw, step in front of him with the bridle on, and fetch him either way first, and then straight ahead; and in a short time you will work it out of him. If at any time your horse should become warm, let him cool. You will gain time by it; for when sulky and heated he is in no shape to learn.—*Ex.*

Why the Land is Running Out.

With all the pride which Americans feel in witnessing the improvements of this country in most respects, it is a source of mortification that in almost every portion of our fair land the soil is yearly growing less productive. We are talking of "worn-out lands" in regions where men are now living who witnessed their first settlement, and where the perishable structures of the pioneers still remain. We are sending wheat to towns that were, in our colonial days, the granaries both of our own and foreign nations; and unless the aristocratic Virginian is content to smoke tobacco inferior to that in which his ancestor indulged, it is certain that he must receive his supply of the cherished narcotic from beyond the borders of the Old Dominion.

The cause of the diminution of the material wealth of the country lies in the fact that we are annually sending away from the land, with each successive harvest, those things on which the soil is dependent for its fertility. We all know that wheat is an exhaustive crop; that it robs the soil of its rich phosphates and several other salts that are essential to the growth of the plant, which, more than any other, supplies the food for men. Let us see what becomes of these essential elements of wheat growth: they are very largely found in the covering of the berry. This, we all know, in the great majority of cases, is separated from the whiter portions of the flour at mills situated at a distance from where the grain is produced. This bran or shorts is fed to cattle in large towns, and though some will find its way into village gardens, by far the larger portion is buried in pits, used in the place of soil for filling up places that are required to be raised, or taken out into bodies of water by means of boats or through sewers.

Of the bran and shorts of wheat, and the entire portions of other grains that are fed to the stock on the farm, some, of course, is returned to the land, and shows its good effects in the crops that are produced from it. But the animals that are raised from them, as well as the dairy products derived from the milk so produced, are sent to distant markets. Even the bones of the animals that die from disease or accident, or are slaughtered for beef, are now eagerly collected, and find their way, for the most part, to foreign shores. To-day the English wheat fields and French vineyard is rejoicing in fertility derived from bones of animals raised in the valley of the Mississippi.

Every year thousands of acres of land are put in flax, a crop that diminishes the productiveness of the soil for several successive seasons. The oil is expressed from the seed, to be used in painting houses, but nearly all the oil cake is sent across the sea. The proprietor of the largest linseed oil works in the West informed us recently that never over two per cent. of their oil cake found a market in this country. The remainder goes to England. The English farmer buys this product of the flax mill, not altogether or principally because it is the cheapest food for dairy and beef stock, but because of the excellent character of the manure that is derived from it.—*Home Journal.*

The tea plant is in successful cultivation some ten miles from Knoxville, Tenn., on the farm of Captain James Campbell, where it has been grown for about ten years. It is said that East Tennessee tea drinkers can easily raise their own tea with very little cost or trouble. The plant is a deep evergreen shrub, and grows about five feet high. It is hardy, and needs no protection from frost—*Rural American.*

The cotton crop of Mississippi is expected to realize $40,000,000.

Tea Culture in Tennessee.

WHAT YOUNG HYSON IS DOING IN THE SOUTH.

The New York *Tribune*, in a late editorial article, commented upon the fact, published in this journal a few weeks since, that tea, equal in flavor to Young Hyson, had been successfully cultivated near this city. The editor of the *Tribune* demonstrated the vast influence which the success of the tea culture in the South would have upon the development of our southern internal resources, and urged that all the informatien connected with its culture should be laid before the public. That the interest which has succeed the announcement of the successful cultivation of this important article of commerce may be enhanced, and to the end that some practical benefit to the industrial interests of the country may be derived from a more general discussion of the subject, we visited the farm of Captain James Campbell, some ten miles from Knoxville, where the tea plant has been in successful cultivation for ten years.

We learned that the plants had been distributed through the Agricultural Department in Washington, about the year 1858. Hon. Horace Maynard, member of Congress for this district, received a few of the plants, and mailed them to Captain Campbell. This gentleman has fully tested their adaptedness to our genial climate, and has succeeded beyond his most sanguine expectations.

The plant is a deep evergreen shrub, and attains, at its full development, about five feet in height. It is hardy, and needs no protection from frosts. It bears an abundant crop, with beautiful fragrant flowers in October. The following season it matures a seed, somewhat resembling the seed of our native hazel, and which grows as readily.

Captain Campbell informs us that he has cultivated merely a small number of the plants, or, as he expressed it, "just enough to keep the family in tea." At his suggestion we drank a cup of the tea, and confess our surprise at its fragrance. In our judgment, the tea raised by Captain Campbell is fully equal to Young Hyson.

The vigor and hardiness of the tea plant, and its adaptedness to the climate of East Tennessee, have been fully tested, with a perfectly satisfactory result.—*Knoxville Press and Herald.*

The Mole a Farmer's Friend.

The food of the mole consists of earthworms, slugs, cock-chaffers, wire-worms, and other pests of the farm; the roots of grasses and plantains are occasionally found in its stomach. Its appetite is enormous, its consumption prodigious. The mole-cricket (Gryllotalpa vulgaris), so destructive in corn fields, meadows, and gardens, in some parts of England, is eagerly devoured by this little quadruped.

Beuche, a German writer on "Insects Injurious to Gardens," mentions the case of a field containing an endless number of these "root worms," or mole-crickets, which was freed entirely by the moles in two years. But it may be said, are we to suffer the moles to work in our gardens, throwing up their unsightly mounds, and disturbing our young crops of peas, cabbages, and other vegetables? We reply that we are no advocates for refusing to hold in check any animals in places where their too great increase is a cause of injury, but this is a very different thing from indiscriminate slaughter—so popular amongst farmers generally—with a view to extirpate a whole race.

In certain localities large numbers of moles may undoubtedly do much damage; as, for instance, in mowing grass, where the mounds of earth would interfere with the work of the scythe, and also injure the crop by mixing with the hay. When, again, moles burrow through dams and dykes, they must be held in check; but as a living naturalist has well said, "It would be too much to wage war with a whole race for an accidental transgression of a few individuals." In corn fields and in gardens we believe that the moles do infinitely more good than mischief by destroying countless myriads of injurious insects, slugs, and wire-worms.—*Ex.*

Corn planted on level ground this year will not be half a crop on account of extreme wet weather.

Selecting Seed Stock.

BY AN OLD SEED GROWER.

Select a few Beets, Carrots, Cabbages, Celery roots, Onions, Winter Radishes and Turnips, before the crops are gathered in the fall, and keep and grow them separate from the main crops for your own sowing. Do the same with all the annuals, selecting Cucumbers, Melons, Squashes, Tomatoes, etc., before the crops are harvested, in sufficient quantity for your own planting the next year or succeeding years, if the variety is particularly pure and very choice. This is the only way to keep up and improve the stock. By planting every year the seeds of the previous main crop, the seeds will degenerate and finally become worthless.

Whatever the desired quality may be, it should be approached as nearly as possible in the selection. If it is earliness, choose the first perfectly matured root, fruit, plant or seed, that is a *pure* sample of the variety. If flavor, tenderness, or productiveness is the quality required, mark the plants made choice of for preservation, and save the seeds by themselves.

In the Blood Beet look for deep color, free growth, smooth, handsome form, small top, without neck, and sweet, tender flesh. Light red beets are earlier, and grow larger than the dark blood red.

In the Carrot, select those having a small top, smooth rooth, and deep orange color.

With the Cabbage, choose those with short stump, large, compact head, with but few loose leaves.

In the Cucumber, straight, handsome form, and dark green color are desirable.

With Lettuce, select large, close, tender heads, free from bitterness, and the slowest to run to seed.

In Sweet Corn, choose uniform, straight-rowed ears, very sweet, shrivelled kernels, well ripened and filled over the end of the cob.

The Citron or Muskmelon should have a rough, netted skin, thick, firm flesh, and high flavor. I never saw a really good melon with a smooth skin.

In the Watermelon, select those with a thin rind, bright red solid core, very sweet flesh, and handsome shape.

With the Onion, thick, round shape, small neck, either deep red or bright coppery yellow, like the Danvers, or pure white. Free growth, early maturity, mild flavor, and good keeping quality, are to be sought.

In the Parsnip, there should be a small top growing out of the center of the crown, large, smooth root, sweet and mild flavor.

In the Pea, low growth, full pods, and large tender peas, rich flavor, and great productiveness, are to be sought. Wrinkled peas are best.

The Scarlet Radish should have deep color, small top, free growth, and clear brittle root.

In Squashes, select those of medium size, and dry, fine grained, deep colored flesh.

In Peppers, select the thickest fleshed, smoothest, and handsomest shaped, and earliest ripened.

With Tomatoes, save the earliest ripened, if smooth and handsomely shaped, and perfectly solid. Select from plants, if possible, upon which there is not one ill-shaped fruit. Cut every tomato crosswise, and see that it is solid before saving it for stock seed.

In the Turnip, handsome form, small top and tap root, free growth, and sweet, crisp flesh.

Medium sized roots should be selected in preference to the largest, as is often done in private gardens, unless it is desired to increase or lessen the size, when the largest or smallest

should be chosen. In all selections aim at improvement in the purity, quality, and productiveness of the variety, although it will in many kinds materially lessen the crop of seeds. Mongrels generally yield a great deal more seed than pure varieties, and this, besides the labor of selecting, isolating, and "rogueing" (as the culling out mongrels from the growing crops is called), is the reason why the raiser of pure seeds cannot afford to compete in prices with careless and unscrupulous growers. *American Agriculturist.*

[A Shot into the Citadel of Humbuggery]—New Seeds and Plants.

To the Editor of The Tribune:

SIR—You and your intelligent readers are no doubt familiar with the name of my venerable ancestor, the celebrated traveler, Mr. Gulliver. About two centuries ago one of his sons emigrated to this country, and although he did not come over in the Mayflower, as he should have done, his family has ever since held a prominent rank among the most industrious and progressive of American citizens. As sometimes happens, the idiosyncracies of my great progenitor, after slumbering through several generations, early reappeared in me. The love of foreign travel, which was so conspicuous in him, I began to feel in my very boyhood, and I have spent the greater part of the last twenty years in visiting distant lands. My distinguished progenitor traveled chiefly, however, to gratify a laudable curiosity and make himself acquainted with the different races, and the manners and customs of mankind. Living in a better age, I have traversed almost the whole habitable earth for the nobler purpose of discovering and transferring to my beloved country whatever in the animal or vegetable kingdoms could contribute to its material prosperity, or add in any way to the welfare and happiness of my fellow-citizens. While I have been abroad in the earnest pursuit of these objects, my brother, Benjamin Franklin, has been as earnestly experimenting with whatever I had the good fortune to meet with in foreign lands that I deemed worthy of notice, and determining how far they might be adapted to American soil and climate. It was myself, you may remember, who introduced the Shanghais and Burmah-Pootras, and several other varieties of the gallinaceous tribe.

And now, having said so much of myself, by way of introduction, I beg leave to bring to the notice of my fellow-citizens, through your columns, some of the fruits of my recent efforts. At present I mention only a few of the most useful seeds and plants which my tireless industry and enterprise are about to confer upon the agricultural world. My labor, I beg you to understand, has been eminently a labor of love. All I ask of the great country I am about to enrich is the public gratitude, which I am happy to see is not withheld from any one who, in the most accidental way, makes a useful discovery or adds a new means or incentive to improvement and progress. With these preliminary remarks I now proceed to mention three or four only of my truly wonderful discoveries. And

First, I would call attention to a new and remarkable variety of the potato—one of the most useful of vegetables, the common blessing of the rich and the poor—which I had the good fortune to meet with on the plains of Quito, South America. It is of good size, though not a monster, of very handsome form, in color a pure white, very fine for the table, astonishingly early, and immensely productive. It will give ripened

tubers in eight weeks from planting, and what is remarkable it continues to throw out and ripen new tubers till the very close of the season. We have cultivated it now in a small way for three years with the highest success. Last Spring I gave my neighbor, John Smith, Esq., a single eye, and the following note, received from him immediately after the final harvest, will show the result. Mr. Smith, I may observe, is one of the most intelligent and successful farmers, and President of our Agricultural Society, whose word is as good as his bond:

"Mr. Gulliver—Dear Sir: The single eye of your *Quito potato*, which you had the goodness to give me last Spring, I planted in my garden on the 20th of April. It came up and grew well. I gave it no better cultivation than is generally accorded to potatoes in the garden. On the 17th of June I could not resist the temptation to look into the hill. Carefully opening it, judge of my surprise to find several beautiful potatoes of good size and apparently ripe. I took six, and then closed the hill as before. My wife cooked them, and I never ate finer potatoes. Without losing their form they were like the most delicious flower. A few days after I opened the other side of the hill and took out thirteen. They made us two meals. At various times afterward I took out from five to fifteen, so that, before the final digging, I had gathered 111 good-sized potatoes. Last Monday, as the frost had killed the vines, I thought I would take up what few might remain, and, would you believe it? I dug three pecks and more, weighing 49 pounds and 11 ounces! I shall save these for seed, and shall want a barrel more, if you can possibly spare them, for my wife says, next year let us have potatoes enough and to spare.

"Yours truly, John Smith."

Of these really marvellous potatoes we have only 200 barrels, which, for the purpose of making the widest distribution possible, I offer at the following very low prices, viz:

1 oz., containing at least one eye	$ 5
1 pound	50
2 pounds	75
Half-peck, or 7½ pounds	200

I regret that we cannot offer them by the barrel, or at least by the bushel, but we do not wish them to get into the hands of unprincipled speculators. Already this class of men have offered us $1,000 per barrel for our whole stock, but we are resolved to confer a great benefit on the public, and therefore shall sell in quantities no larger than half a peck. Introduced as extensively as we propose, the effect of this potato on the wealth and agricultural interests of the country must be incalculable. After the second year's cultivation we may bid defiance to famine, and were all Ireland to be precipitated upon our shores in a single month. not a son or daughter of Erin would want for potatoes! Let me add that I have ventured to name this king of potatoes the Quito Imperial.

Second. In my last visit to the Island of Formosa, I was so fortunate as to make the acquaintance of Prince Linn, who, by the way, is a most intelligent and enthusiastic horticulturist, second to no one probably in the world. He takes great interest in our country; subscribes for all our agricultural papers which have attained the circulation of a hundred thousand copies, and is introducing into Formosa all our wonderful improvements. He showed me many civilities, and as a small return, he said, for all the benefits we were conferring agriculturally upon his beloved island, he gave me from his own garden a single plant of his favorite Strawberry, which I have named after its donor, Prince Linn. It is a strong grower, with

robust fruit stalks, and so prolific that a single healthy stool is sufficient for an ordinary family. The fruit is a beautiful cone of a brilliant color, with flesh firm, yet melting in the mouth, and of so delicious a flavor that he who has once tasted of the Prince Linn, will never wish to eat again of the acid Wilson, or the insipid Agriculturist, or, indeed, any—even the finest of our fashionable berries. The sweet and the sour in its marvellous composition seem to be so admirably blended that any addition to either would only mar its superlative excellence. Sugar is never used with it, and cream would only detract from its unparalleled deliciousness. It has only one fault, if, indeed, it is a fault for on this point alone can the judgment of men differ: it seems to me a trifle too large, especially for ladies to eat without dividing, since ten or twelve will ordinarily fill a pint basket. I ought to remark that this strawberry keeps in full bearing for at least ten weeks—a consideration not to be overlooked by the lovers of this delicious fruit. Unfortunately, we have only 15,000 or 20,000 of these remarkable plants, which I propose almost to give away at $20 each, or $150 a dozen.

Third. From Kamschatka I brouht, four years ago, a new variety of Oats, that on our experimental farm has proved a wonderful success. In weight and productiveness it far surpasses, I will venture to say, every other kind of oat in the known world. The kernel is very plump and large, white, with a tinge of yellow, with a hull so transparent that one is with difficulty persuaded without trying his teeth that it has any hull at all. Their average weight is 57½ pounds to the bushel, and I hardly dare tell you of their product lest you should suspect me of some little exaggeration. But facts are facts, notwithstanding unworthy suspicions and incredulity. Last year we sowed upon our farm here, on corn stubble, ordinarily manured the previous year, a single acre, carefully measured by Squire Jones, one of our county surveyors, who, also, at my request, attended to the harvesting, thrashing, cleaning and measuring of the crop, and whose affidavit is now in my possession; and he makes oath to the astonishing fact that from that single acre he measured up of remarkably clean and handsome oats 297 bushels, 3 pecks, 1 quart and ½ pint! I have this whole crop, and about 500 bushels from another field, now for sale; but, in justice to my fellow-citizens, must sell in no larger quantities than one gill to each purchaser, and this I will send by mail, neatly and securely done up, on the receipt of $1, and four cents in postage stamps. I should observe that these oats grow with such vigor and tiller so wonderfully that a peck of seed is amply sufficient to sow an acre. For making Scotch "poritch," Scotch cakes, and, indeed, every kind of bread, these oats have no rival. If they cannot be raised in Scotland, then all Scotland must emigrate to this more fortunate country. I call these oats the Royal Kamschatkas. Beyond all doubt, they can be cultivated in Alaska, and will give a new and immense value to those recently acquired possessions. Indeed, it will be no betrayal of confidence to say that my suggestion of this fact determined the purchase of this territory by the United States Government. Had I whispered the thing to my friend, the Emperor of Russia, $50,000,000 would not have tempted him to sell that attractive country.

I was about to speak of some other valuable acquisitions I have made, but fear I have already trespassed too

far upon the columns of the *Tribune*. Hereafter I may call attention to some other of the wonders of our experimental farm. By the way, Mr. Greeley or your agricultural editor must come and see what we have here. The sight would well repay the time, as it would show, as no newspaper article can do, the enterprise, the energy and the success that have marked the long career of yours, with great consideration,

GEORGE WASHINGTON GULLIVER.

Gulliversville, N. Y., May 1, 1869.

P. S.—I should be doing an injustice were I to omit saying that during all my foreign travels I have always been supplied with excellent tea and coffee, "of full strength," from the Great American Tea Warehouse, and have preserved my health in all climates by carrying a box of Dr. Ayer's celebrated Pills, with a bottle of his Cherry Pectoral, and for an occasional tonic making use of Hostetter's Stomach Bitters, with now and then an odd glass of the old Plantation 10X1860.

Will you have the kindness to inform your numerous readers that I am in want of several thousand agents in all parts of the country, to whom I will pay, without regard to age, sex or ability, $47 83 per day, and expenses. Please reserve for me five pages of the *Tribune* for advertising from the 10th instant to December 24. G. W. G.

Making Manure.

It should be a cardinal principle with every farmer to economize his manure. Upon it depends his success, and, without it, his labors must to a very great extent be without profit, if not attended with absolute loss. If it is necessary to have the barn-yard on a hill-side, it is equally necessary to have the lower side protected by a wall, or some arrangement by which the escape of liquid manure may be prevented. It is almost equally important to have a spout to convey rain water from the roof of the barn in some other direction than immediately through the barn-yard. It is bad enough that the manure heap should be exposed to the rains which fall directly upon it, without adding to it the droppings from the roof of the barn.

If such improvident farmers were to behold the actual value of the fertilizing material thus lost, rolling from their purses in the shape of dollars and cents, how energetically would they labor to prevent this waste. The loss of a single little gold dollar would stir them up to a greater activity than the direct waste of a hundred times that little dollar's value in the form of liquid manure. Year after year, silently, steadily, the golden streams are flowing from their purses. Tell them of their error, and they acknowledge it, but rarely does it happen that being reminded of it in a friendly manner, they make a single effort to correct it.

A MAINE man gives his method of treating baulky horses as follows: "Let me inform humane men and hostlers, and all who hold the rein, that the way to cure baulky horses is to take them from the carriage and whirl them rapidly round till they are giddy. It requires two men to accomplish this, one at the horses tail. Don,t let him step out. Hold him to the smallest possible circle. One dose will often cure him; two doses are final with the worst horse that ever refused to stir."

"RULE the appetite and temper the tongue."

"REVENGE not injuries, but forgive them."

High, Medium and Low Farming.

POINT OF MAXIMUM PROFIT.

If you ask the meaning of these terms, I reply, reversing the order above: profit is what your crops give you over and above all costs of production. These costs are: 1. Interest on the value of land; 2. Taxes, if any; 3. Value of labor done by yourself or others at the time; 4. Team work; 5. Cost of manure; 6. Wear and tear of implements and farm machinery; 7. Any other cost or costs you may think of, not included in the foregoing.

The interest on value of land must come in as part of the cost, for the reason that you cannot afford to hold land and draw no interest on its value. The taxes must come in, because if your State tax farm land, you cannot escape paying. So of every other item—all must be charged to the crop, and paid by it before you can begin to reckon profit.

Keep accounts with your farm, and with each crop grown upon it. To farm without keeping accounts, is farming in the dark, and you may not ascertain whither it leads till too late. If you farm in the dark, you may keep on twenty years with some crop which loses you money every year, or may stop with some one which gives you handsome yearly profits, simply from not knowing which to continue and which to stop. Farmers are generally supposed to be men of sound judgment. Their employment is adapted to make them such. They generally are such. The keeping of farm accounts so as to throw light from this year's doings on the question, what to do next year, is not easy; but in the exercise of such a judgment as we heartily ascribe to farmers, you can keep them well enough to prevent your going blindfolded many years in courses leading to disaster, and wed you to those tending to prosperity.

By the *point of maximum profit*, I mean that point in the ascending scale from low to high culture, which gives the highest profits over all costs. This is not a fixed but a variable point, varying with the value of land, the price of the crop grown, the price of fertilizers, distance from markets, etc. As a general rule, where land is dear the cultivation should be high, and of course expensive, for no man can afford to grow small crops on land worth $300 an acre. Small crops would but litmore than pay interest on value of land. On land worth but $30 an acre, he might make profit, more or less, from small crops. On land worth but $10, he might make something from still smaller crops. Where land costs but little it may be cultivated cheaply and yet pay; but let a man undertake to cultivate an acre worth $300 cheaply, and he will inevitably find it a losing experiment. Every farmer should endeavor to ascertain at what amount for labor and fertilizers he can grow crops on his land, with a better profit than by the expenditure of more, or less, for the labor and fertilizers; and that, if he can ascertain it, he may regard as the maximum profit in his case.

But what is to be understood by low, medium and high farming? Giving your land little or nothing, and expecting little or nothing in return, is low farming. If all farmers worked in this way, the soil all round the face of mother earth would wax worse and worse, till it would be equal to sustaining but half the present population of the globe, instead of becoming able, under the hand of man, as God designed it, to sustain ten-fold more than its present inhabitants. Yes, God made the land and sea such, that, by the natural laws he has stamped upon them, this globe must perpetually become

better and not worse, as the abode and life-sustainer of the human race, till ten times its present population shall be able to nestle on its bosom and feed on its bounties. The progress will be slow or fast, as man fails of his duty or discharges it earnestly and faithfully. Low farming is athwart the purpose of the Almighty. He wishes the land to become better for each generation than it was for the last. The man who farms it in a low way, giving it little, taking less, not half paid for his labor, make it worse.

There may be cases in which a rather low grade of farming is to be tolerated. The owner of a large farm may have reasons of his own for not selling a part of his land to enable him to cultivate the rest better. He may have good reasons, known only to himself, for holding the whole a while longer. But, as a general rule, it is folly, not to say wickedness, to go over large extents for small returns. It affords no profit; it less than pays for the labor; it is the costliest way possible for obtaining the productions of the earth; a wise man will not walk in it long; the man who is both wise and devout, will not dare persevere in it, so manifestly is it opposed to the will of the great and benevolent Designer, who never meant that the farmer should work hard, life-long, for small pay.

Medium farming may be considered half way up the ladder from low to high farming. By the low farming, of which we complain, as against God and humanity, and most of all against the man who practices it; as low as 10 to 15 bushels corn per acre, and other crops proportionately scrimped are often obtained. By medium farming, our idea is 50 to 60 bushels of corn and other crops in proportion. This, in large portions of our country, yet comparatively new, not yet densely populated, distant from markets, freights high, may just about tally with the point of maximum profit. You may perhaps say you can more cheaply win the productions of the soil at this state of cultivation than by one higher or lower. At any rate, by such cultivation as will give you 50 to 60 bushels of corn and the like of other crops, your land will not be run down, and you will not sin against yourself nor against posterity, for it will pay you and will leave those who come after you a fair chance. Perhaps this is as high a cultivation as should be aimed at by the farmers of one-half of our cultivated land.

But this is not high cultivation; it should not be thought of as such; it may be wise temporarily; but as the population increases, it must be superseded. Where population is already dense and outlets to other countries dense, and especially if land be high, larger crops must be obtained, or no great profit in the cost of production can be realized, certainly not the greatest. From 80 to 90 bushels of corn, and proportionately for other crops, should be the aim, under such circumstances, if the land be of good quality. If a failure to reach this mark should be attributable to divine providence, in not giving favorable seasons, cheerful submission to a higher power becomes a duty, but if attributable to anything the farmer himself did or failed to do, he should not be satisfied with his own doings, but should try again, and keep trying, till he can grow his 80 to 90 bushels of corn, and other crops in proportion, in an average season, to set off for less in seasons that are unfavorable, that the average yield may be as high as above named, and gradually increasing, as the land, under a high system of cultivation, increases both

its productiveness and its saleable value.

Medium farming pays better than low everywhere. High farming pays better than medium wherever the circumstances exist which call for it. Farming in a way that deteriorates the soil, will not pay, in the long run. Farming that improves the soil a little each year, as God made it to be improved by the brains and hands of man, will always pay and everywhere. Thousands of farmers, in all parts of our country, fail of the best rewards of farming by too low cultivation, for every one who fails by cultivating too highly. The danger of failure by going down the scale too low, is a thousand times greater than that of ascending too high. Let us strive to avoid the former, and not be over fearful of the latter.—NASH, *in the Working Farmer.*

Japan Clover—What is it?

MR. EDITOR:—A worthy citizen of our county has intimated that I may do some service to the public by a few words in your paper upon the character and qualities of this new forage plant. From various parts of the State, specimens of "Yellow Clover" and "Rabbit-foot Clover" have been sent me, with an inquiry if these are Japan Clover. It is often a good mode of ascertaining what a thing is, to learn first what it is not.

WHAT IT IS NOT.

Let me say then that Japan Clover is not any plant that has been known more than eight or ten years in this State. So far as I have seen or heard, it is not yet found east of Mecklenburg county, except where it has been sown within two years past: though westward it is extensively naturalized to the top and beyond the Blue Ridge. It is not a true Clover, with flowers growing in heads upon the end of the stem or branches; nor are its flowers either red, yellow or white. It does not come into flower until autumn. So that any plant flowering in this part of the State in spring or summer, is not the Japan Clover.

WHAT IT IS.

Now as to what it is. Its leaves are not unlike those of the "Yellow-top Clover," wedge shaped, from one-third to one-half inch long, and about half that width. The main leaf stalk is about one-eighth of an inch long, much shorter than in the Yellow Clover. The flowers, but a few together, grow in the forks of the leaves. They are very small and of a pale purplish color; or whitish with purple veins. These produce small pods, rather long than broad. In poor soils this plant attains but a few inches in height, but in rich lands reach two feet and can be cut like Clover.

ITS VALUE.

As to its value as a forage plant, it will probably be of much service to the South, as it grows upon land otherwise useless, and cattle greedily devour it and thrive upon it. But it is only in poor land that I am disposed to recommend its introduction. I am satisfied that when Clover and Blue Grass can be profitably cultivated, they will produce a much heavier forage than can be gathered from Japan Clover within an equal space. Besides they come into use in spring and early summer; while now, the first week in July, Japan Clover is but two to four inches high on the same ground where Clover, Blue Grass, and others, have gone to seed and been mowed.

M. A. CURTIS.

WITH perhaps the exception of wheat, all the English crops are expected to be of at least an average yield.

[From the New York Herald, July 27th.]

What the Word Coolie Means.

Most Americans and Europeans, who are unacquainted with Chinese life, imagine that the word coolie embraces in its meaning all the population of the Chinese empire which is devoted to agriculture and the various departments of productive industry. This is an error. The word coolie is Bengali, and signifies laborer, and is not Chinese at all. It is used by the populations of the seaboard towns, who, for the most part, speak in common with the foreign residents, which is called "Pigeon English," to designate a particular class of employes. There are "coolie riggers," "coolie carpenters," "coolie deck hands," house coolies," &c., but they form a separate class from the population around them. In like manner the word mandarin is generally supposed in this country and England to be a Chinese term; but it is not. It is also Pigeon English, and is derived from the Portugese word "mandar," to command. Being accepted by the foreigners of the seaboard as entirely satisfactory, the Chinese themselves, who take kindly to the absurdities and facilities of the Pigeon English for the transaction of business, have adopted it into their vocabulary. In like manner many other words, common to both natives and foreigners in China, are misunderstood in the homes of the "outside barbarians," and being misunstood, are of course misapplied. For instance the epithet "coolies," applied to emigrants from China to California, and fastened on these enterprising people in the Golden State, is a misnomer. Yet thousands believe that the Pacific States are being overrun by a different class of Chinese laborers from what they actually are. The Chinese, who labored so faithfully and well in the building of the Pacific railroad, and who form so important and valuable an element in the laboring population of the State of California are not coolies properly so-called, but emigrants from China seeking for higher remuneration and better means of subsistence than was afforded them in the central flowery land. Very many of them, it is true, enter into contracts with wealthy merchants of China, to do a specified amount of work and stay a certain length of time in the territory of Uncle Sam, and agree to terms understood and and agreed upon before they leave the coast of China, just as coolies agree with coolie agents at Chinese seaports; but they are entirely a different class of people. The majority are emigrants from China, who have voluntarily left the shores of the Celestial Empire, just as Irishmen have abandoned their mud cabins in Connaught or Munster to seek a wider field and a higher scale of remuneration in the teeming West; and like the Irish they pay their own way, and are "free and independent" from the start.

SEVERAL English gentlemen who went last September to Virginia to spend some time in hunting in the Blue Ridge, were so delighted with the country that they purchased a large tract of land on the Manassas railroad, near Gainesville. A colony of English will settle on the land in the spring.

A CORRESPONDENT of an exchange advises American farmers to adopt the rule of many English farmers—that is, never to allow two white straw crops, such as wheat, oats, barley and rye to follow each other.

IT is proposed to make sugar from pumpkins, which contain about four per cent of the saccharine quality.

The Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S. DANCY, - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

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JULY.—Average range of Thermometer at Tarboro', N. C., for the month of July, 1869, 77 degrees. Fifteenth, 100 degrees; sixteenth, 100 degrees; seventeenth, 101 degrees. A remarkably hot spell; mercury ranging higher than ever before noticed at this place. The whole month very fine for all kinds of crops. Cotton and corn prospect to date (18th Aug.) very good.

Crop Prospect in Eastern North Carolina.

We think we may safely make the assertion that there is as good a prospect for a heavy crop up to this time, the 6th of August, (all things considered), as there ever was in any previous year.

From what we can hear there are several sections in which the corn crop has been injured by drouth, but as a general thing the dry weather has been the means of assuring us there will be a heavy crop; for if it had not been for the dry weather there would have been a larger per cent. lost by the weeds and grass than has been by drouth.

The seasons are fine at this time, and if they should continue a few days longer the late crops of corn and cotton crop will be very heavy.

EDGECOMBE THE BANNER COUNTY.

This county, as in the past, so in the present time, is certainly a great distance in advance of her sister counties in agricultural reconstruction.

We have recently been on two excursions out of the county, and at all points the farmers put many questions to us, such as,

What is the prospect in Edgecombe?

How many thousand bales of cotton will you make?

How is it you raise such large quantities of compost and cultivate such a large area in land? &c., &c.

Therefore, as the people out of the county seem to be desirous to know specially what is being done in Edgecombe, we will now give, as we intend to from time to time in subsequent numbers, a synopsis of the agricultural doings in this noble county.

As for the prospect, it is better than the most sanguine could have reasonably expected.

From the first to the last of May nearly every countenance looked sad;

but now these gloomy countenances shine forth in radiant hope of a rich harvest.

This heavy crop is the result of heavy composting, and the use of a small quantity of imported fertilizers, and by adopting the rule which we hold to: that is, not to plant a single acre of land that is not sufficiently prepared to produce a remunerative crop under favorable seasons.

Under these considerations the farmers, old and young, made one determined effort; and to make this effort a success they left their lounges and shady groves and attended to their farms in person.

We have recently visited our friends in various sections of the county, and from what we saw and the spirit manifested by the farmers, we have no doubt that within a few years Edgecombe will produce double the amount per acre, thereby enhancing her lands several hundred per cent., as well as her net profits.

We noticed along the entire line of our visits (except now and then a farmer who does not take the RECONSTRUCTED FARMER or any other agricultural journal), the farmers were repairing canals and ditches, as well as cutting new ones.

In all directions they are busy hauling vegetable mould into their stock lots; also, raking up the surface of ponds and hill-sides into piles, in order that it may be lighter to handle and haul; besides, it will go through that change which is necessary to become good food for the crop of 1870.

In many sections there is a good quantity of marl being dug to put in the compost as well as to spread on the land.

Just here we will say for the benefit of all those who desire to see the effect that marl has upon the cotton crop, by all means to visit the farm known as the Bell farm, owned by Dr. J. H. Baker and the Hon. George Howard. This crop is said to be the most luxuriant ever grown upon that farm.

Dr. Baker, who has the direction of this farm, informed us that he ascribed the superiority of this crop over all others to the marl.

He told us nearly all the marl was composted upon the ditches along the hedge rows, and by upsetting the fence and raking marl and dirt in one long ridge along the line of the fence.

The farmers are turning their attention to stock raising, as a variety of the different kinds of swine have been imported into the country.

We saw a number of stock lots and houses where there never was one before, in which the stock are enclosed securely at night; also, pens and sheds in which the droppings from the stock is properly saved.

The mules and horses, as a general thing, are in better condition; and as for the swine, we learn that there are twice as many as in 1868, and in thrifty condition. As for the cattle, there are not half as many, as the loafing thieves appropriated them to their use, but they are looking better than we ever saw them; and upon many farms the cows are yielding double the milk and butter they

formerly did, which is owing to proper attention.

There are a large number of young orchards, embracing a variety of apples, peaches, pears, &c.; also, many young vineyards, embracing a variety adapted to our climate.

In a few years Edgecombe will cease to import fruit and swine, as there will be a sufficiency raised at home.

There will be several miles of Osage Orange hedge planted this fall around the gardens, orchards, and for interior fences. These plants can be purchased cheap, or may be easily raised by planting the seed.

Mr. David Bulluck, of this county, has invented a plan for tile draining of wood, different from any we have seen or read of.

We see in the August number of the *American Agriculturist*, page 294, a plan which may answer as well.

Mr. Bulluck last spring laid 2,000 yards, which up to this time has had the desired effect, as he showed us fine cotton where he said he had never succeeded before, owing to a surplus of water in the soil.

His plan is to take four boards of any length, (width to be determined by the amount of water which may be estimated to pass through), and nail them securely together, forming nearly a square conduit; he then bores holes with an auger at short intervals on one side of this long box.

He then lays these boxes or tiles in, as you would any other tile, with the holes down, for the water to rise into the opening in the box from the bottom, which is a sure protection against it being choked up, as is usually the case when the water is allowed to enter from the top or sides.

We noticed one of his drains upon the hill-side that was about one hundred yards long, and discharging, as we supposed, about three gallons of water to a minute.

This box tile is nearly five feet below the surface, and was made of pitch pine boards, four inches wide.

Mr. Bulluck is so well pleased with the operation of his tiles that he intends to put down several thousand yards the coming winter and spring.

Our Exchange List.

With the first number of this journal we began to exchange with similar works North, South and West. We were kindly noticed and promptly exchanged with by Northern and Western contemporaries. Not so with journals south of this State. We apprehended the mails were at fault, and again mailed packages to them, with no better success. Up to this time no response to our exchange offers has been made. Why is this? A friend suggests that the name with which we christened our bantling has made it unpopular, and that the Southern agricultural journals are disposed to snub us. If such be the fact, all we can say, gentlemen, is go ahead. In reply, heretofore, to friendly criticisms about our name, we said then what we now repeat, that the term "Reconstructed" has no political significance whatever in these columns; that it was selected from the English lan-

guage as being in our judgment a term pointedly appropriate to the dilapidated condition of Southern agriculture, and as such we adopted it and popose to hold on to it, and if we can, even to a limited extent, succeed in our undertaking, we shall be satisfied of having done a good work, and we know we shall be duly credited by our friends and patrons.

Politicians may fret and scold to their hearts' content over names and places; our aim leads us in different channels of thought, and we trust with good results to our wasted Southern country.

(Exchanges please copy.)

We welcome "Watchman" to our columns again. His line of thought is in full accord with our own views, and this communication supplies the place of an editorial we were about to prepare on the same subject. We invite him to continue his essays on this and other kindred subjects.—Every far-sighted cultivator of the soil will see the truth and force of Watchman's conclusions, and will at once, we hope, begin to make his plans as much for the future benefit of the land as for the present crop. His interest calls for it; that of his children demands it. No country can be said to be prospering, when the soil is annually deteriorating. It may appear to be, but time will soon disclose the truth. Every farmer should often ask himself this question, "Is my land improving, or does it get weaker from each year's cultivation?" It is the simplest thing in the world to pull down a house or to destroy the fertility of the soil. The veriest bungler or dolt can do either. But to build a house in a workmanlike manner, to preserve or restore fertility to the soil, requires judgment, skill, energy, brains. Watchman strikes the key-note to the grand Agricultural Opera of the day. Repeat your blows, for they are in the right direction. We must keep our lands on the "up grade" and hold to the "brakes." Then, and only then, can we feel sure of a prosperity that will endure.

Saving Seed.

What a crying shame upon the majority of Southern people that they annually neglect to save seeds frow their gardens, and rely upon Northern and Western seed growers. It is the easiest of tasks to save your own seeds, when they are in a few rods of you. A little exercise of memory will tell you that cabbage, colewort, turnip and mustard seeds come to maturity in spring, and others later in the warm season; and a little exercise of your hands, both pleasureable and healthful to the body, will in a few minutes save enough for any sized family. Why, then, rely on other regions for your seed? An idea prevails that it is cheaper to buy than to save, as a package of seed costs but a few cents. This is a great error. If you have them in your garden it is cheaper to save than to buy at one cent per package. Moreover, Southern seed, in our opinion, are better for Southern soil and climate than those raised at a distance from us. And while

the expense individually is small, collectively it is heavy. A single house in this town informs us they sold last spring one thousand dollars worth of garden seed. The county of Edgecombe pays tribute annually to other sections for Irish potatoes, onion setts and the various small garden seeds, to the tune of at least ten thousand dollars, which should be kept at home by saving our own seed. Commence the good work now, right now. If any seed are ripe in your garden, rise from this article and gather them. Continue it from season to season, and there will be so much added to the pin money of the family.

Fences—No. 2.

We wish it understood that we cannot do without some fencing in this county; neither do we wish to debar any farmer from having as much as he may choose; but to be forced to build and repair to the amount of millions of dollars annually in every State, is an actual curse to the country and a plague upon its industry.

To take a fair and considerate view of this question it would seem next to an impossibility for law or custom in a free country to continue in practice anything more unjust, burdensome and tyrannical upon the agricultural interest than the present law of enclosure.

We know this will be considered strong language, but we mean it to be such, as we shall endeavor to prove every word to be true.

If a man purchases a tract of land, how much will it cost him to enclose 100 acres before he can reap any benefit from it?

It is reasonable to suppose he will have of this 100 acres at least two fields; supposing each of these two fields to be in the best possible shape, (a square), it will require at least 800 panels, and allowing 13 rails to the panel, it will take 10,400 rails to fence it.

To split this number of rails from the forest that has been culled over, as is the case on a great many farms, will cost at least $80. The hauling and building will be $30; by adding these together we have $110, cash paid out.

Experience teaches this fence will have to be replaced in about 8 years, making the annual cost of repairs $13.50. To this should be added the value of land on which the fence stands, and value of timber used. The fence will occupy at least two acres. The timber, being the best in the forest, is worth 40 cents per cord; 10,400 rails will make 100 cords.

We learn from the census of 1860 there are 23,763,969 acres of land, valued at $143,301,065, making the average valuation per acre a fraction over $6; consequently, the valuation of this 50 acres will be $300.

To add these items together, we have—

First cost of fence, - -	$110 00
Annual repairs, - - -	13 50
2 acres of land, - - -	12 00
100 cords of wood for rails, -	40 00
	$175 50

The cost of fencing and repairing is 58⅓ per cent. on the first cost, consequently the 50 acres of land must

be depreciated to that amount. When we take into consideration the interest upon this $175.50 for 8 years, at 6 per cent., we have $104.20, which detracts from the land an additional 34 per cent., making this field, at the expiration of eight years, cost $279.70, nearly as much as it first cost.

Let us calculate what the aggregate cost will be to keep the fences of the whole State in repair for the next eight years :

There was, according to the census of 1860, 65,000 farmers, possessing, in round numbers, 23,700,000 acres of land, which makes an average of 360 acres to the farm.

Of this amount 6,500,000 acres were improved, which makes an average of 100 acres of arable land to each farm; consequently there must be 13,000 fields.

If the cost of keeping in repair one field of 50 acres for the next eight years be $175.50, what will it cost to keep in repair 13,000 fields?

The answer will be $22,715,000, to say nothing of the interest, which increases the amount to $36,261,000, which must be lost in a period of eight years for repairs.

Here we might, by the same rule as a basis of calculation, show that over thirteen hundred millions of dollars will be expended in the aggregate by the United States, within a period of eight years, but it will suffice for us to confine ourselves to North Carolina.

This calculation does not include the lane fences forming the division line between farmers; neither does it include the many thousands of miles of fence which requires two fences on the public roads, where one would answer, which is nearly a sufficiency for all pasturage purposes when taken into consideration with the interior stock lot fences which abound on all farms.

We know a large number of men, men who believe in the "good old way," will say this is an exaggerated statement; but to all such we ask you to take the statistics and go into a fair calculation, and if you do not agree with us that it is an odious and tyrannical tax upon the industry of the country, then we desire that you inform the RECONSTRUCTED FARMER by what rule you base your calculations upon.

There are others who will say that we are favoring the rich at the expense of the poor men. They will hold that the non land-holder, who has no land, cannot own a cow or hog, as he will have no where to keep them, but as it now is he can feed in the public roads and his stock can roam whithersoever they may choose.

Let me ask you if the non land-owner does not have to secure a home for himself and family from the land-owner? This you are bound to admit. Then why is it he cannot secure a home for his cow or hog, as well as for his family?

Some will say he is not able to keep them up, as he will have to use more feed than if they run out.

Have you not learned that you cannot succeed in raising stock running at large; and do you know it has not been profitable in many sec-

tions for years; and do you not also know that the many loafing thieves render it impossible to succeed, however good the range may be?

Do you think it right for men to have their stock feeding and trespassing upon other men's lands? If you do, your conception of right is different from ours.

Go to Europe, and there you will find no law of enclosure, consequently you will not see the beautiful landscape marred by fences meandering here and there, marking the division lines between farms, but living fences of hedges or posts of stone set up marking the boundaries.—There the shepherd with his faithful dog keeps the herd of stock within proper limits.

We have no doubt but that if the same policy was adopted in this country, especially in the Northern and Western States and all through the range of Southern States where stock raising is profitable, there would be saved the millions of dollars now lost annually by the dogs, besides many other losses that might be saved by the attention of the herdsman.

We cannot believe that our Creator fashioned the grand and beautiful prairies of the South, West, and Northwest for the purpose of being fenced, as is the common custom.

But men even go there and introduce the detestable law of enclosure, thereby destroying the beauties of nature; for all must admit the planting of posts, in order to describe boundaries, would be more economical as well as more pleasant to the view.

A large number of farmers will admit this to be an oppressive law, and at the same time will hold that the proper time has not yet come for us to do away with it; but will agree that in the course of time this law will be abolished.

Why procrastinate when this law costs the country such an amount without remuneration?

Therefore, we hold that this law should be canvassed before the people, and that the Legislature should abolish it in this and all other States similarly situated, and adopt that law which will compel men to keep their stock where economy, justice and equity demands, upon their own premises.

We are confident that our course will cause our journal to be less popular, as a large number of planters will not agree to depart from this time-honored law.

We have been advised by many of our friends what course we should pursue, and what subjects we should write upon, and not to act prematurely upon certain subjects.

We here say for the information of all concerned that the RECONSTRUCTED FARMER is an independent agricultural journal, and that we shall fearlessly, at all times, in our own way, give our views frankly upon all subjects affecting the agricultural, mining, mechanical, and manufacturing interests of this country.

St. Louis has 3,000 opium eaters.

How Young Farmers Should Build.

We will suggest to young farmers or new beginners one idea which we wish them to remember, whether they observe it or are governed by our teachings or not; and that is, before they commence building, to consult some architect, as they will find it greatly to their interest in after life.

A large majority when they first set out are short of means, and consequently are compelled to build small houses of every description, which as a matter of economy is right, as every man should build according to his means; but as they grow old and their business and family increase, they will then see that the houses they erected at first are not sufficiently large for their purposes. Then it is they will wish that their houses were built a little different, in order that they might add to them, and at the same time have them more convenient and in better style.

By the assistance of an architect, which would not cost much, all this might be obviated.

We hold it to be to the advantage of every farmer to have his outbuildings as convenient as he possibly can. Therefore we suggest the propriety of having all of them under one roof. For instance, your horses, cattle, hogs and sheep; barn and shelter for all farm implements.

Go to some architect and tell him how much money you have to spend for buildings at present, and that you want to so build that when you have finished all will be under one covering.

He will be able to give you the plan, and in the long run it will cost you much less than to do the same amount of building scattered here and there, as is the common rule in the South, while it will be of no inconsiderable amount in a life time running here to the horses, and there to attend to the hogs, and yonder to the cattle and sheep.

We know from experience what we write to be so; and if we had possessed the knowledge twenty-five years ago that we now have, we would have had all of our stock under one building at night, with grain, forage, and well for watering under the same roof.

New Kind of Cotton.—Says the Quebec *Gazette:*

A new kind of cotton, called *bubuy*, is now being extensively cultivated in the Phillippine Islands, through the exertions of a missionary, Father Rivas. The tree which produces it is of very large size; it begins to yield in the fourth year; after the fifth it has generally attained the thickness of a man's body. Its pods measure from three to four inches; a hundred of them will make up three pounds of cotton, which, when cleaned, are paid for at the rate of nine piasters [45f.] per hundred.

The production of corn and wheat in the United States in 1868 was about 980,000,000 bushels, or 28 bushels per head.

California Bartlett pears, eight days from the trees, are selling in New York for ten cents each.

Horticultural Department

Rev. J. B. CHESHIRE, D. D...Editor.

Remarks on Fruit Growing.

On this subject we shall abridge some profitable hints from the *Horticulturist*. There seems to be a conflict of opinion as to whether the ground of orchards should be cultivated or not. Trees, like every other plant, need care and attention to insure their health and fruitfulness, and judicious cultivation is one of the means to insure this end. Every person who has observed orchards under the different methods of treatment knows that trees will grow faster and better if the ground is well cultivated and manured. As a general rule, young orchards, not old enough to bear, may be moderately stimulated, provided it is not at the sacrifice of the maturity of the wood. If too rapid a growth is induced, the wood will not mature, and the cold of winter will kill it. Hence a farmer must use his judgment well, between the two extremes of cultivation and non-cultivaton, as giving rapid growth, or retarding growth altogether.

If any farmer will take pains to study the simplest facts in vegetable physiology, he will find that the roots of all trees flourish best in the surface soil, when the vegetable mould is abundant, and where they have the benefit of sun, air, warmth and fertilization. Their nearness to the surface varies from two to six inches; rarely ever ten. It will then be apparent that in our treatment of trees we must use such means as will, on the one hand, neither mutilate or disturb these roots, and, on the other, not deprive them of appropriate and necessary nourishment and moisture. During the first year of planting the roots of fruit trees extend only a short distance from the trunk, and increase rapidly during each succeeding year, extending at last far out beyond the tips of the branches. Thus, in course of time, the soil to an infinite degree becomes filled with innumerable roots, large and small; and to drag a plow down deep through this vast mass of precious feeders would not fail of producing a deep and irreparable injury. But the objects of cultivation can be far more easily attained by a light stirring of the surface-soil with a cultivator, harrow or hoe to a depth of three inches—rarely more—but a plow should never be used. Hoed crops of roots, &c., never of grain, may be permitted in the open spaces; but year after year these spaces are becoming less in extent, until, in a short time the orchard covers the entire ground, when both branches and roots occupy and need the entire surface.—Then all the energy of the soil should be directed to the production of fruit. The grass and weeds should be kept down, the surface kept constantly mellow, and all tendency to neglect persistently resisted.

In the South, when the genial atmosphere induces an exuberant growth of wood, the effort should be to restrain the wood-growth and urge the development of the fruit.

To this end cultivate with root-crops until the trees have arrived at fruiting age; then if the growth is too rank and the ground too rich, seed the ground down exclusively to clover. This does not make a stiff, compact sward, like fine grasses, which are usually so detrimental to the the growth of puny trees, but will keep the land open and porous, as well as serve to enrich it. At intervals of several years, the sward may be ploughed up, and the ground cultivated for a season with root-crops, to be followed by clover again, with a top-dressing of manure occasionally. In this way the land is kept in good heart, the crop of clover will give a fair return, the trees will be healthy and well developed, the roots will have freedom of growth, with the moisture they delight in, and no mutilation of roots by the plow; and by their fruitfulness be both an ornament and a profit to the owner of the farm.

Following Nature in Horticulture.

Hon. W. C. Flagg read an interesting essay at the May meeting of the Alton Horticultural Society on the subject of "Nature in Horticulture," in which he took exception to the *loose talk* in horticulture about "following nature;" for, said he, we do not in horticulture seek the conditions nor the results of nature.—Instead of scattering trees growing irregularly, we want great masses regularly planted for convenience in cultivation. Instead of vigorous trees, we want fruitful trees; and in place of the small and acrid fruit of the fields and forests, we desire the large and luscious monstrosities of the garden and orchard. Our whole efforts in cultivation are really *departures* from the natural and healthful status—that is, "What we covet is really a state of diseased and abnormal action." Hence it is evident that we can not say that we "follow nature" in horticulture, except in this sense, that we must know the laws of nature, and obey or violate them according to the object to be accomplished. In propagation, we learn to observe the law of relationship in grafting the apple upon the apple and not upon the pear; and again to violate it; in grafting the pear upon the quince, in order to threaten life, which tends to fruitfulness. In transplanting, we learn that fibrous-rooted plants recover themselves most easily, and seek by frequent removals to induce roots of that character, for the benefit of the tree in its final and permanent planting in the orchard. In cultivation, we stimulate an excessive growth to obtain early maturity; and in pruning we sometimes endeavor to induce stronger growth of wood, or again to threaten life, and induce the formation of fruit-buds.

The art of horticulture is the wise application of natural sciences, and hardly in any sense an imitation of the prodigal and costly methods of nature. Nature is extravagant, as, in view of her large landed possessions, she can afford to be. But the fruit-grower on his prescribed acres must make every rod blossom and fruit. His art must "mend nature." Nature cares not if she has no crop, she has no debts to pay. But the horticulturist has "his young barbarians at their play," whose natures, at some expense, he hopes to train into something higher and nobler, and this, and food, and raiment make profits needful, and he must produce or create these profits, as all men should, by yearly care and toil.—*Horticulturist.*

Remedy for the Peach Worm.

Mr. Isaac G. Mask, of Moorefield, West Virginiă, writes to the *Country Gentleman* as follows:

"There is a handy means for the destruction of this heretofore fatal enemy to the peach tree, which is practiced here, which has proved certain beyond peradventure. It is simple, of easy application and expeditious. It consists of the use of boiling water applied to the collar of the tree, in quantities varying according to the age of the tree. In small trees, say one inch in diameter, half a pint is sufficient, and a pint is enough for larger ones. Remove the earth from around the tree a few inches from the body and a few inches in depth, and just pour the water boiling hot on the exposed roots, and it will kill every egg as well as worm, with positive certainty. It has been tried here time and again upon trees that were more than half killed, and a perfect restoration has been the result in every case. No danger need be apprehended from the effects upon the trees. When a large number of trees have to be operated upon, a fire should be made in the orchard for heating the water, so that it can be appliad boiling hot. Considering the importance of this remedy to peach growers who may not have heard of it, I deem it but common justice to give it circulation through the columns of your paper. Its certainty as a remedy may be implicitly relied upon."

Rural Taste.

It is a common mode of thought to assert that the farm and the home should be the spot in which a taste for rural ornament can bo most appropriately and successfuliy developed. This is true, but as a sequence from other beginnings; and we are disposed to attribute the education of one's taste as much to the associations of the school-room and grounds as to home associations. If in our country districts the old, shaggy, red or brown weather-beaten structures for school-houses were replaced with buildings of an ornamental style of architecture, with grounds appropriately laid out and planted in something simple, perhaps nothing beyond a pretty lawn plat, surrounded by a neat fence, and planted in evergreens, we feel sure that the constant sight of this pleasant object, and the associations naturally formed in the mind of the scholar, would do far more good than centuries of lectures or libraries of books. The taste of a child comes from the school-room as well as the home, and goes from one to the other. Hence we make a plea not only for the improvement of our country school-houses, but for the importance of extending this subject even beyond, to COLLEGE GROUNDS. In the minds of college managers it seems only necessary to secure the ground, "the *terra firma*," and then build their massive walls; and when that is done, all is done. Not so, indeed. Thousands of young men and women frequent these grounds day after day and year after year. If the grounds are well laid out and tastefully displayed, there is an opportunity presented for the development and culture of a refining taste, such as no musty literature ever possessed. It is practical, too, and will insensibly help to mould the future disposition and character, and act on it for years to come. Let us then remember that if we would have rural art and taste become widespread, we must begin with the youth of the country, and at the fountain-heads of education.—*Horticulturist.*

Connecticut farmers are now cutting their tobacco, which is said to be very fine and a large yield.

How to Gather and Preserve Plants.

The ladies are deeply interested in this subject, which we are glad to see is becoming more popular every year. A good, healthy ramble in the fields or woods, gathering dainty flowers and beautiful leaves is a far more inspiriting and stimulating means of enjoyment than crochet work and poetry reading in-doors.

The *Maine Farmer* again pleases the lady reader with a little practical information as to how to do it nicely and well.

1. If possible, gather plants upon a dry day, and protect them from sunlight and wind.

2. Plants should be gathered when in flower.

3. A single specimen should be a perfect representative of the plant—not only the flower, but bud, fruit, or seed, all its various kinds of leaves, and, in small plants, even the root. With some plants these can all be represented in the same specimen, but with others it is necessary to collect specimens both in flower and in fruit.

4. If the plant be small, dry the whole, root, stalk, and flower; if large, a branch in flower should be preserved; at any rate, a flower with the leaves should be dried, if possible.

5. Plants should be thoroughly dried between sheets of paper—old newspapers will answer. Two kinds of paper are needed in drying them, namely *folds* and *dryers*. Folds are simply pieces of paper folded once, like a sheet of writing paper, into which the plants to be dried and pressed are to be put. Dryers are larger sheets of thick unsized paper—old newspapers will answer—used to absorb the moisture of the plants when being pressed. In changing the plants to new dryers—which should be done every other day—never remove them from the folds until completely dried.

6. When there are plants within these dryers, press them between hard wood boards, using for the purpose a weight of from 50 to 75 lbs.

7. When the plants are perfectly dried, remove them from the dryers, and attach them to sheets of white paper about 11 by 16 inches in size, and write upon each the scientific and common name, when in flower, where found, soil it flourishes in, etc.

It is well for parties who desire to collect plants, grasses, etc., growing in their localities, to record the same, and prepare blanks where may be noted, under a proper head, the name of the plant, where found, time of flowering, duration, stem, leaves, flowers, remarks, notes, etc.; in this way botany becomes a pleasure instead of a dread study.—*Horticulturist.*

Remedy for Black Rot.—R. Blanchard, Lyndonville, cures the black knot on plum trees in this way:

Take a paint brush, dip it in spirits of turpentine, and thoroughly saturate the knot, being careful not to touch the tree except in the diseased part. It stops the knot and the tree puts out healthy branches below it. I am careful to burn all branches removed in pruning. As the summer is the time the mischief is done, every fresh excrescence should be pared off and the turpentine applied, and it will harden in a week.

Dwarf orange-trees from China have reached California in good condition. They are not over two feet high, and an acre of ground would contain over four thousand. Although each tree will not produce over a half-dozen oranges, yet the yield per acre would greatly exceed that of standard trees.

CORRESPONDENCE.

Compost Manuring in Edgecombe.

Messrs. Editors of Reconstructed Farmer:

The problem which we have now to solve is: How to make free labor pay a yearly profit, make the soil rich, and keep it so; *and do that without injury to any other part of the land.* This is what I understand by the reconstruction of Southern agriculture.

Tested by these requirements, our compost system of manuring has hardly been a success. Admirable as it is for accumulating large masses of rich material for our crops, so far from fulfilling these main purposes of every good system of manuring specified in our problem, the tendency of our present practice is rather to make our country poorer instead of richer, and the annual profit, for at least two years out of three, very questionable.

In obedience to the maxim of restoring to the soil the fertility lost in our service, Edgecombe has for the last twenty years done manuring enough to have made every arable acre a garden spot.

There is no country in the world where manuring has been so heavy and incessant with so little permanent improvement left in the soil. We know what that system was and is: It consists in hauling from five to seven hundred bushels of earthy mould, scrapings, &c., on every acre to be cultivated; then mixing or composting it, during winter, with any stimulating fertilizer. In the spring this compost is drilled in, or spread broadcast, for the intended crop; which crop, generally requiring summer culture, leaves but little in the soil for any after crops. One crop of cotton usually takes away nearly all the manuring of the same year; and for another such crop on the same field, the same heavy manuring must be done every year, *and yet may be a failure.* This is a heavy operation: little short of putting one plantation on top of another every two or three years. Before the war, when we owned both labor and soil —and this system was new and rich in resources—it doubtless paid a profit. But now it is not in the power of free labor to sustain profitably a system so expensive and destructive; and even if it pays a present profit, it must, as now practiced, prove ultimately destructive to the vital resources of the country.—But it is asked, can there be such a thing as a destructive system of manuring? Let us consider what it is that reduces eve-ture restore them by long years of rest. ry virgin soil below the worth of cultivation. Chemistry and common sense both answer that it is because we take from the soil many precious constituents and ship them off yearly in our crops, till the soil can no longer remunerate our labors; to make it remunerative, we must replace them at once by art, or let na-

Now, if one-half of the country is under cultivation and its capacity for producing our staples is to be maintained by our present system of domestic composts, how long will it take for most upland farms to use up all their earthy material fit for composting? This inconvenience is said to be already felt by some farms not favorably located on swamps or creeks, and some have already scraped off an extensive surface of their woodlands, and this within the short space of twenty year; showing the significant fact that we have long ago shipped off the precious elements of the cleared land, and that our destructive industry is doing its best to ship off those of the outlying lands. The same process which made the cultivated fields poor, must as surely

impoverish the outlands too. It is only the question of a time which must surely come, and then our country will be one of the poorest in the world. The woodlands robbed of their soil; the woods dwarfed and feeble, unfit for timber or range for stock; and when cleared, the new ground will require as much manuring as the old field, with nothing fit to manure with, without you buy it.

Between domestic and bought manures we justly determine in favor of our own home manures, chiefly because they cost nothing but the common labor of the farm. But if we continue to rob the outlying land of its soil, the most expensive bought manures would evidently be more advantageous, because they add much value to the soil and rob no part of it of any value at all.

But the great evil which pervades our system is this: Our main staples require exhausting summer culture; and whether we use bought fertilizers or domestic manures, our mode of cultivation takes them out of the soil nearly as fast as we put them in, because we have no rotation of crops worthy of the name, nor any plan auxilliary to fixing improvement in the soil; but of this, more hereafter. After all this protest against our system as now practiced, it does not follow that composting ought to stop, for every farm has some waste lands and scrapings fit for nothing else; and every farm should, if possible, make its own manures. Let them confine themselves to these waste materials, but save their good outlands as something most valuable and sacred. Besides, when the exhaustion begins to tell in stubborn facts, no doubt the sagacity of our farmers will find some remedy to fall back on. I present the evil that we may begin to seek the remedy in time. And this seems the more necessary when we reflect that the tendency is to divide large farms into smaller ones; and that many families of freedmen are rapidly locating and clearing small farms in the hitherto untouched forests, who will be sure to follow the good or bad examples of their more illustrious teachers.

We may hereafter consider the ways and means to convert our present system into one of saving and enduring profit. WATCHMAN.

Analysis of the Southern Corn.

1,000 grains give—

Ashes	12.8 grs.
Combustible matter	987.2 grs.
	1,000

The ashes give—

Bi Phos. Lime	8.9
Soluble salts and acids	3.9
	12.8

If you think either of these analysis worthy, you can use them.

Yours truly, D. M. BUIE.

HOW TO PRESERVE MELONS FROM THE STRIPED BUG.—The practice of the "Long Island" melon growers to preserve their melons, &c., from the striped melon bug, is to sow through a fine seive, ground plaster or gypsum on the plants, so soon as they are above ground, early in the morning while the dew is on the plants—such plaster forming a crust through which the bug will not eat. Two applications are generally enough to preserve the crop. *It has never failed*, at least for twenty-seven years, to my personal knowledge. Tobacco dust, ashes, &c., have failed.—WM. H. S. in the *Southern Planter and Farmer*.

A farmer having ploughed the land about his apple-trees for the first time this spring was surprised by a second blossoming about two weeks after the first bloom had disappeared.

The Poultry Yard.

Chicken Disease.

To the Reconstructed Farmer:

Seeing mention made of the "Reconstructed Farmer" in the Asheville (North Carolina) *Pioneer*, of July 1st, and willing to gain information about North Carolina and farming there, in view of emigrating thither with hopes of assisting in some small degree to again help to build up her shattered walls, I beg, through the columns of the Farmer, to occasionally, as time will allow, hand you a little article which may by chance benefit its agricultural population, if you think them worthy of publication. I have yet not seen a copy of the Reconstructed Farmer, and if any brother farmer will please to send me one now and then, I shall feel *much obliged*, and any article it may contain that I can in any way help to elucidate, I shall be happy to do so. I beg to subjoin the following:

Having myself gone into the chicken raising to some large extent, and lost *several hundreds* by a disease very similar in all its bearings to fever, I tried a decoction of *white* oak and hazle-nut leaves and black pepper boiled, adding to it a little asafœtida when cold, that seemed to do the chickens a deal of good. I tried other recipes, but my last and best remedy seems to be the *best* of all. I put the chickens their water in old *iron* pans and pots, and always keep *old rusty iron*, such as nails, stove-piping, or any other old pieces in the water, and occasionally throw it out on the ground to rust, putting in another supply; then, in three or four days, when the first is rusted, I change it, *very seldom* emptying the pots and pans of their water, still putting in fresh water to what is already left in. Since I took to that plan I have not lost a single chicken, young or old, by death. They all seem well and healthy, look kind in their features, and lay well. The oldest cock we now have was sick nine (9) days. He is now three years old. I opened a great many that died, but failed to discover what caused their death. I found the inside healthy in appearance in all its parts, except the guts, and they invariably were contracted and resembled whip cord. Each chicken was as full of fat as there was room for. The symptoms—the head, legs and feet of a *healthy* color; the head drawn back into the hackle; stand still or remain on the roost for several days if not taken off; no inclination to eat, but when they found water would squat down by it and drink incessantly for half an hour or more. When taken for death, they fall off the roof *backwards*. Sometimes they lived three or four days after being taken sick, and fall away to quite skeletons.

John Whatmore,
Bridgworth Farm,
Dunleith, Illinois.

Old Trees.—There is an in interest in old trees which seems to be a never-failing topic of discussion. The oldest tree or the biggest tree in any country is sure to have a reputation hardly equaled by any other local curiosity. Old people, too, love to talk on these familiar topics, and their children after them repeat with pleasure the queer old stories and ideas about the "old trees" which still live, while every one else grows old and droops away forgotten. Here is a practical argument to the young and to the present generation to plant trees for all futurity. They may fall from the ranks of life at any time, but the trees they planted bear their names on for years with many a precious memory.

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A

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DEVOTED TO

THE FARM, THE GARDEN,

AND

THE HOUSEHOLD.

PUBLISHED AT TARBORO, N. C.

ing to the state in which it is applied. If fine, the effects will be quick; if coarse, they will last over several years. Bone meal is excellent for all kinds of fruit trees, all kinds of vines, for vegetables and grass land. We would recommend 500 pounds per acre application every time. For cabbages nothing can be better, while on grass lands the effects are most marked.

Poudrette is used principally on vegetables, and where a good article is obtained we have known it to forward crops at least a week earlier than usual. It should be used liberally, and mixed half and half either with bone meal or superphosphate. Every farmer can make his own poudrette by taking the effete matter from his vaults and mixing twice the quantity of earth with it, allowing it to dry well.

Bone meal, bone bran, bone dust and flour of bone, are only technical terms for different degrees of fineness of ground bone—the last as fine as flour, the first containing atoms the size of peas. The following table will sum up all that is necessary for practical information:

FOR TOP DRESSING GRASS LAND.

From 400 to 500 pounds per acre of superphosphate or bone, on mowing land, should be applied early in the spring. It can also be applied to advantage just after mowing. The application of 200 pounds per acre to old pasture land will be found highly beneficial. It should be applied just before or after a rain, when the ground is moist.

FOR WHEAT, RYE, OATS AND BARLEY.

Use from 300 to 500 pounds superphosphate per acre. After the land is ploughed and harrowed, apply the superphosphate, and then sow the grain, &c., and harrow all in together. It can be applied when the grain is two or three inches high with decided benefit.

FOR BUCKWHEAT AND MILLET.

Apply 400 pounds superphosphate per acre, using it in the same way as for other grain. This amount is sufficient to warrant a crop, even on poor soil.

FOR CORN AND POTATOES.

Apply half a handful or two-thirds of a gill of superphosphate to each hill, thoroughly mixing with the soil, then drop the seed.

FOR BEANS AND PEAS.

Apply half a handful of superphosphate to a hill. If sown in rows, to be used in the same proportion, mixing it with the soil, using the same quantity, at first hoeing round the plants.

FOR TURNIPS.

Apply 300 to 500 pounds per acre of superphosphate or bones, with the seed; this quantity will give an excellent crop. This application at the time of sowing will produce the clearest and sweetest turnips. The sowing should be done just before a rain, if possible.

FOR BEETS, CARROTS, ONIONS AND GARDEN VEGETABLES.

Apply at least equal to 500 lbs. of superphosphate per acre, spreading it on after the land is ploughed and harrowed, then to be worked in thoroughly with a harrow. After thinning, apply some as a top dressing, and cultivate thoroughly. The dark and healthy change of color given to the plants will now be observed, producing large vegetables.

FOR SQUASHES, MELONS AND CUCUMBERS.

Apply a handful of superphosphate and guano mixed to a hill, thoroughly mixing it with the soil, then drop the seed. At the first hoeing apply a handful to a hill as a top dressing. This will fertilize the growth, so that the fruits will come to maturity in the warm season when they are most desirable.

FOR CABBAGES AND TOMATOES.

Apply a handful of bone dust and superphosphate to a plant at the time of transplanting; cultivate thoroughly, and apply the same quantity as a top dressing. Treated in this manner, cabbages have been obtained four times larger than those without the phosphate.

FOR ASPARAGUS.

Apply eight quarts of bone meal and superphosphate to the square rod, with about eight quarts of salt, at the time of digging over the beds in the spring; to be well raked in. In about ten days after, apply eight quarts more of salt as a top dressing.

FOR STRAWBERRIES.

Scatter along the rows, if grown in that method, or sow broadcast over the bed. For field culture, apply 700 pounds per acre; for garden culture, four quarts to the square rod. Sow in the spring, with a good dressing of leaf mold, which will keep the ground cool and moist, and insure a good crop.

RASPBERRIES, BLACKBERRIES, AND CURRANTS,

can be treated in the same manner in the spring and during the summer.

FOR FRUIT TREES.

Fertilizers are better for the health of the tree than even barnyard manure. Rake it well, which will give a vigorous and healthy growth ripening the wood early, and causing it to produce a larger amount of fruit-buds and luxuriant growth of the fruit, also improving the quality.

Fertilizers alone must be liberally applied to produce good effect; but the farmer who uses them judiciously in combination with his own barnyard manure will find them to produce the very best returns.—*New York Independent.*

There are 700 acres of grapes in a single county of Minnesota.

The True System of Farming.

Trying to do too much is a common error into which the farmer often falls. His great eagerness in striving to be rich is doubtless the cause of his error. He is ambitious and energetic, and forms his plans on a large scale, too often, perhaps, without counting the cost. He buys a large farm, and wants to be called a "large farmer," without understanding or considering the true elements that constitute a real farmer. He fancies the greatness of that profession, as is too often the common estimate, to be in proportion to the number of acres, not to say cultivated, embraced within the boundaries of his domain. The fact is now being spread abroad that a large farm does not make a man either contented or happy, but on the contrary, the reverse of all these, unless well tilled, when his labor is rewarded by ample crops and fair success in the various departments in which he is engaged. No farmer can realize the full benefits of his profession without adopting a thorough system of culture. His success, commensurate to his wishes, always depends upon the manner in which he prepares his grounds, plants his seed, and rears his stock. Neither of these departments, which may be considered the cardinal ones of his profession, will take care of themselves. The soil may be rich, but it needs culture. His seed may be sown, but it should be in due time, and always on soil well prepared and of a suitable quality for the production of the crop desired. His stock must be constantly cared for—it derives its thrift from the soil, and sends again to that soil the substance it requires; but this is not done in a loose or haphazard way. The farmer's care is required, and all his better judgment must be exercised in keeping up this system of recip-

rocal benefits that may be realized by every intelligent and industrious farmer.

Thorough cultivation and systematic attention to all parts of his business is indispensable to a good degree of success. The very corner-stone to this whole system of farming is to do what you do thoroughly—nature will not be cheated, and never gives full returns to the half-way work that is practiced by vastly too many calling themselves farmers. If the land has been worn, the extent of that exhaustion and the food required must be first considered. When ascertained, the full measure of these requirements must be given, to bring out full returns. If the farmer has but a small stock, and consequently but a small amount of manure to replenish his land, it is obvious that but a small farm can be supplied with it; and good judgment at once dictates that to cultivate properly a large farm, artificial fertilizers must be used if good crops are obtained. And so with the labor, two men cannot suitably till one hundred acres of land, when the labor of two men, and perhaps four, might be profitably employed on seventy-five acres.

This is the great error in farming. Two men strive to do what four men can hardly do, and thus thousands of acres are run over, half tilled, and producing half crops. The land is run over till worn out, sustaining, year after year, the unnatural tax till its energies are entirely exhausted, and it fails to yield even a feeble crop, because the life is worn out. Much of the soil of Virginia and other southern States is a type of this. Thousands of acres are entirely useless and exhausted, and will ever remain so, till the first elements of its power are returned to it. This process is going on in many of the western States. The soil is treated like an inexhaustible mine; the tillers crying give, give, give! till in a few years it will have nothing to give. The boast of the West is large farms and large fields of grain; plough, sow, and reap, is the business of western farmers, drawing out the very life of the soil, sending away in the heavy exports that are constantly going onward, without returning to the soil the food it requires to make it productive.

The light that is being spread abroad on this subject is beginning to correct this practice to some extent, but in most instances very little is returned to the soil to keep it alive, till after several years of continued cropping it manifests signs of exhaustion and ultimate barrenness. When tillers of the soil understand their true interests, they will cultivate no more land than they can do well. Fifty acres of land for tillage, brought to a high state of cultivation, pays better than one hundred run over in the way that many do. *Jefferson Farmer.*

During the last year there were in the United Kingdom of Great Britain 43,562,000 acres under cultivation, of which 11,659 were devoted to cereals, 4,865,000 to vegetables, 5,600,000 to clover and rotation grasses, and 22,164,000 to permanent pasturage. England alone possessed 3,179,000 cattle and 21,900,000 sheep. In every 100 acres in England, 42 are pasture; in Wales, 56; in Scotland, 23; and in Ireland, 64.

Unexpected things constantly arise to prevent a farmer from carrying out his plans, but a mechanic proceeds unobstructed. Therefore, farming is not a mechanical but a scientific occupation.

What an Old Experienced Farmer Once Said.

That to sow foul seed is as bad as to get the itch and measles; and much worse to get rid of them.

The stock and seed must be renewed; or, like the land without manure, they will run out.

That a man must take to the ground that he tills, or the ground will take him.

That it is good to make mistakes sometimes, as that will whip you in to avoid them.

That ashes are good on meadows when the season is dry; also on potatoes, roots, and other things that require moisture.

That it is always good to be up early, not only to work, but to see to things, that all is right—fences up and cattle in their places.

That it is a good thing to have your work done early in the spring; and a very good thing to have it done early in the fall, so that you are ready for the first foul weather.

That it is good to keep an account of things, and know where you stand.

That it is a very good plan to treat your boys like *your* boys, and not like strangers. This will keep them at home.

That to abuse a "crittur" is to abuse a member of the family.

That it is not humbling yourself to go to a neighbor and ask his advice, especially when he surpasses you in his crops. And so you must act in return. Get light wherever you can, and communicate it: that is the doctrine. To be humble like the earth you work—that is a good way of living. It prepares you to go to that earth again when you die.—*Colman's Rural World.*

Thirty thousand acres of public lands were disposed of to actual settlers during January, in Nebraska, Missouri, and Wisconsin.

Tin Cans.—A correspondent of the Philadelphia *Ledger* gives a method of closing tin cans, which, he states, completely obviates the usual difficulties of unsealing. Take one pound of rosin and a tablespoonful of lard and melt them together, the lard rendering the rosin less brittle when cold. After filling the can with fruit, place the tin cap in position, then take a piece of strong muslin, larger than the opening in the can, smear one surface with the melted rosin, and fit smoothly and accurately over the tin cap; when cool, smear the upper surface of the muslin with the rosin. The can is readily opened with the application of hot water. Glass jars, it is stated, may be sealed in the same way. The above method has been tried for several years, and, it is asserted, has effectually preserved the canned fruit from the air, while allowing ready access to the contents of the vessels.

To Revive Faded Black Cloths. Boil two or three ounces of logwood in vinegar, and when the color is extracted, drop in a piece of carbonate of iron, as large as a chestnut; let boil. Have the coat or pantaloons well sponged with soap and hot water, laying them on a table, and brush the nap down with a sponge. Then take the dye upon the table and sponge them all over with it, taking care to keep them smooth and brush downward. When completely wet with dye, dissolve a teaspoonful of saleratus in warm water, and sponge all over with this, and it sets the color so completely that nothing rubs off. They must not be wrung or wrinkled, but carfullly hung up to drain. The brownest cloth can be made a perfect black in this simple manner.

A great man's intellect is like glass—it admits light as well as reflects it.

The Capacity of an Acre.

Previous to the building of the Camden and Amboy railroad through New Jersey, over thirty years ago, there were tracts of land within two miles of Burlington, N. J., which were sold at five to ten dollars an acre. The reason for these low prices was the simplest one imaginable—they did not produce the interest of the money they cost. Now some of this very land is selling at over $100 per acre, without buildings. The cause of this advance in prices is equally plain: the land now produces much more than interest on its cost.

In any location where the land can be made to produce the interest of $1,000 per acre, it would be safe to purchase it at $200. Though many acres around Burlington have produced, and are still producing, such returns, yet all are not. Some are very far exceeding it, while others are falling below, according to the crops cultivated and the skill and industry applied. It is to be observed, in this connection, that the best returns are realized by perseverance, continuing at the business for a term of years, until fruits, if fruit culture be adopted, have come into full bearing. A trial of a single year amounts to nothing if then abandoned, as the first year, or even an old farm, is generally one of mere preparation for the second. The first may pay a profit, but not often.

Long experience in a thousand places has shown that an acre of land can be made to pay the interest on a very large sum. Mr. Leonard of Monmouth, obtained from asparagus the interest of $5,000, and from grapes the interest of $7,000 per acre. Both these may be regarded as standard crops, not liable to casualty, especially asparagus. In our neighborhood some remarkable results have been secured from standard fruit crops. There is an acre of blackberries on the farm of Mr. Dulty which has produced the interest of over $8,500 gross—no doubt of $7,000 net.

The owner of a three-acre field of purple cane raspberries told me that his sales in one season produced him the interest of $25,000 gross. Large fields of even perishable strawberries have been made to pay the net interest of $4,500 per acre.

There is a field of two and a half acres of blackberries near me, containing 2,600 plants, which last year produced the interest of very nearly $30,000 net. There can be no mistake about this last crop. But it was altogether exceptional, not likely ever to be repeated, as berries were then high, and while others growers had few or none, this field bore abundantly.

The value of land is to be measured by its productiveness, not by its price. All the paying returns above recited were obtained by good ordinary cultivation, not by forcing or extravagant outlay. Had these been resorted to, the return would have undoubtedly exceeded the extra cost. But the owners planted, cultivated, and waited until their plantings came into bearing. Such waiting is some times inconvenient to men of moderate means; but men wait longer for legacies which are much less valuable. Thus grapes, asparagus and the cane-producing berries are seen to yield a larger interest for money invested in them, even on high-priced land, than can possibly be realized from low-priced lands where no such markets as ours are within reach. The land at $300 per acre in such a market is cheaper than at $10 without the market. The one acre pays interest on the cost of ten acres, while the other pays interest only on its own cost.

But time and patience are required to realize such returns. It is he who endures to the end that succeeds; not he who plants and immediately quits.—*Hearth and Home.*

Picking Seeding Wheat.

A correspondent of the *Canada Farmer*, writing on the subject of wheat growing offers the following:

"An important operation in the process of wheat sowing is too often neglected—I allude to the picking of seed wheat. First, it points out to us the bad grains, which may thus be removed, reducing the per centage of lost seed; and secondly, it strikes the root of smut and other fungi; for it is these very imperfectly formed grains that are chiefly attacked by such parasites. Now smut is found in the imperfect grains, and in such small quantities (as botanists tell us), that it is absorbed in the root of the young plant, bursting it in a short time after the earing, throws upon it fungal, in the dark, rusty form with which we are but too familiar. If we simply steep our wheat in water, the light grains which, though too light to be blown out by the fanning mill, are imperfect, will rise to the surface, and may be removed. If to this water we add lime, we shall kill all traces of smut, &c., which may have clung to the otherwise sound seed by contagion with the imperfect grains. But let us remember, above all, that the most certain prescription for the securing of good crops is a change of seed; get your seed from a different variety of soil."

Sponge Pudding.—One quart of milk, one cup of flour, salt, seven eggs, bake one hour or more, and eat with sauce; rich cream sauce is very nice.

The Home and the Farm.

THE SOUTH TO FARM IN.

An enthusiastic southron, writing to the *Hearth and Home*, sends the following reasons to tempt a farmer southward:

1. A man can produce more upon a given quantity of land. The summer is so long that he can grow two crops in succession upon the same field. I have often seen in the Palmetto State both wheat and corn—maize or Indian corn—gathered the same year from the same soil, the latter being planted after the former had been harvested. Last autumn I saw lands from one acre of which 300 bushels of Irish potatoes had been gathered, upon which were then growing a full crop of beans—both marketable products. But there are dozens of productive growths that may be arranged so as to yield two crops upon the same soil the same season, in this way. Of course this doubling the labor of the soil is exhaustive; but the means of renewal are well known, and easily and cheaply prepared to suit each particular growth. The mild season covers seven or eight months of frostless weather.

2. He can make better crops. Many crops mature better—better in quality, I mean, here—than they do in colder latitudes; as wheat and most grains. Southern wheat contains more gluten than northern, and is, therefore, more nutritious, rises better, and is more available in making macaroni, vermicelli, and such articles of that kind as depend for their quality upon the gluten—formerly called the vegeto-animal principle—contained in the flour. Southern flour commands a higher price in the markets of the world by reason of its greater proportion of this element.

3. He loses no time in winter. This season here is so short and so

mild, that out-door work is never interrupted beyond a day or two by bad weather, and that occurs as often in summer as in winter. Snows rarely ever last more than a couple of days, and very rarely reaches as much as four inches in depth. Most winters have but one snow. Many winters have no snow at all. The thermometer falls as low as zero—Fahrenheit—hardly once in twenty years. Ten degrees above zero may be given as the minimum temperature in this latitude and at this elevation. Our streams never freeze over.

4. He can save his produce more certainly and at less expenses. Apples and potatoes, with all vegetables and fruits that are to be kept through the winter, are kept either in banks or cellars of the simplest kind, that need no warming or graduation of heat or heat-measures.

5. He can winter his horses and cattle more cheaply, they requiring less winter feeding. Indeed, at all times during this season, even in midwinter, stock can gather food by grazing about the fields.

6. He loses no time from the preparation of his composts and manures during the winter by freezings; nor does the low temperature often interfere with the chemical processes in this preparation.

7. The bee-keeper, in addition to having nearly twice as long for his bees to work in the year, has far less expense in wintering them. He need not provide a cellar for them in winter, not even an enclosure, but merely a shelter, which is more necessary, perhaps, in summer than in winter, but certainly necessary for summer in all latitudes. Bees rarely require feeding in winter any more than they do warming, unless they have been robbed too late in the autumn. There are very few weeks, even in winter, in which bees cannot gather something for food.

8. The wool-grower enjoys advantages equally great with the bee-keeper.

9. The vegetable gardener has an almost limitless range of vegetables and fruits, from the earliest strawberry, that ripens a month before New York even is rid of its river-closing ice and banks of snow to the latest grape that is gathered in December. Some varieties of winter turnips grow in midwinter.

10. The manufacturer also—if the planter desires to blend the two—can find, in addition to the above advantages of climate, water-power suited to any conceivable kind of machinery.

11. Lands are cheaper—prices just now in the State ranging from one to five dollars an acre for good lands. Thousands of acres of inferior land can be bought for fifty cents an acre.

12. Fuel is cheaper and less needed.

13. If he desires to turn his attention to cotton, he can apply his system of culture to that with success. A man can readily manage ten acres of cotton. An acre can, with manuring and care, easily be made to yield 500 pounds of cotton for the market—ginned cotton. The price is about twenty-five cents per acre: that is $125 to the acre, or $1,250 to ten acres. I know the names of parties who have the past year raised 2,000 pounds of seed cotton to the acre, which is usually rather more than 500 pounds of market cotton.

Horace Greeley has purchased some land in New Jersey, and will plant sixty acres of it with cranberries.

The peanut trade of North Carolina amounts to more than the cotton trade in value.

Grain and Stock Culture.

This subject is deservedly exciting increasing attention among farmers and planters. A correspondent of the *Southern Cultivator* thus writes:

"I wish to add a word of approval to the communication of Dr. Lee, under the head of 'Grass Culture in the South.' It seems to me, Mr. Editor, that of all the people in the world, the farmers of the South are the slowest to profit by experience. Any other set of people under the heavens would certainly have been profited by the experience of the last two or three years in cotton culture. I do not advocate the abandonment of the cultivation of cotton—by no means; it is eminently the crop of the South; but until we devote less of our land, time, and attention to the cultivation of cotton, and more to the cultivation of grain, grass, and clover, and to the raising of stock, we can never be an independent and prosperous people. Go to Memphis—and I expect it is so at other places—and you will find farmers from all the country around hunting up freedmen, and offering them wages that they cannot afford to pay, to go to the country for the purpose of cultivating cotton. Last year, when farmers determined to raise meat and bread enough to supply them, and some to spare, it was not so. And this, Mr. Editor, is one of the beauties of grain and stock raising. The grain and stock raiser is not annoyed with a number of careless and worthless laborers around him, but he can, with his own hands, improved labor-saving machines and implements, cultivate and improve his land, live independently and contentedly; and what is more pleasant and beautiful to behold than the green fields and the waving grain, the herds of cattle and flocks of sheep, as they graze and 'roam o'er a thousand hills.' There is a beauty and perfume, too, in the sweet-scented clover and the new-made hay; and there is music in the neighing of the horse, the lowing of the cow, and the bleating of the sheep; and there is even music in the tinkling of the bell as the cows and sheep come home at night! Our crops, Mr. Editor, should be diversified. We should learn to depend less upon hired labor—not men and women—but labor-saving machines and implements. They eat nothing—are not off to all political meetings, but are always at home and ready for work. Isn't it strange that almost every farmer we meet will say, 'Raise plenty of grain and stock for meat and bread, and some to spare,' and then go directly home and bend all his energies to the raising of cotton, and next year have northern corn, flour, meal, and meat to buy. It seems strange to me, but so it is, and so I am afraid it will ever be."

How to Use Buttermilk.—Place a common wire sieve over a pail, draw or turn the buttermilk into it, gently stirring the bottom with a spoon; what is saved in the sieve can be put into a jar, and when a quantity accumulates it can be stewed out by placing it in an iron kettle and simmering slowly until the oil or butter rises on top and the sediments settle to the bottom. It makes good shortening for pie-crust, and where there is a large dairy it may be used to fry in. Before it is tried it makes excellent cream biscuits.

Washing New Calico.—If persons about to wash new calico, especially black, wil first soak it in salt and water, it will prevent it from fading.

There is a goat farm of seven hundred head in Autauga county, Ga.

From the Farmer's Gazette.

Lespedeza Striata vs. Red Clover.

A CASE IN POINT.

In passing about this and some of the adjoining counties a person here and there observes a patch of red clover; rarely, as far as my own observation extends, exceeding one acre. For the most part the grass on these patches is of feeble and stinted growth. It has cost the owner, in one way or another, more than it will ever pay for; not on account of any intrinsic worthlessness in the clover itself, but in the ill adaptedness to our climate and our naturally thin and poor soil. For the first year the owner has always been disappointed by the scantiness of the return for his labor and expense. The second season it of course shows itself in less force, part of the plants having, in the natural course of things, died out during the winter. The third season, no seed having been scattered during the two preceding ones in consequence of the very close pasturage it has undergone, and the plant being only a biennial, the clover has nearly if not wholly disappeared, leaving the poor farmer to begin again his course of plowing, pulverizing, and manuring, for another stand. The consequence is he is discouraged, and ceases to cultivate a plant which seems to pay him so poorly for his pains. Hence there is so little of it to be seen in this section.

But as the wayfarer proceeds, he ever and anon observes along the road sides, extending more or less deeply into the adjoining woods, large patches of short, mossy, rich-looking herbage, which has sprung up no one can tell how, for no one has sown it, but into which every animal that loves grass is sticking its nose. In many instances these patches embrace large areas of what is called old field, where one or two years ago nothing was seen but unsightly broomstraw, briars, ironweed, hogweed, &c., but where now is seen a beautiful carpet of living green, that delights at once both the eye and mind by the combined charms of beauty and evident usefulness. Yet on no one of these places has the least care or cultivation been bestowed. Not even seed has been scattered upon them by any human hand. Nature has done all this for us of her own accord, and is going to do much more for us as she proceeds to invest our yet vast unoccupied spaces with her new-fashioned livery. Under God, the plant has here worked its own way from some very small beginning, just as it will work its way in a year or two where seed has been ever so sparsely scattered—soil and climate favoring. Now, when will red clover do the same for us? When will white clover do it? When will any of the valuable spear grasses? When, with as little painstaking, are our poor farmers to have those broad acres of red and white clover, especially for winter pasturing, which are said to be so superior to Lespedeza, and on which their stock are to range to so much greater advantage?

But perhaps the following case may serve to place the comparative value of these plants, at least in our soil and climate, in a more striking point of view:

A person in this vicinity had last year a small pasture covered, as usual, for the most part, with broomsedge, mullien, pennyroyal, ironwood, &c. Part of it, however—certainly not more than two acres, for so the owner asserts—was pretty well set with Lespedeza. Yet even that small portion was partially covered with young pines, briars, bushes of one kind or another, and with

worthless weeds, which the Lespedeza had not yet had time to crowd out. It was, moreover, in some places, partly denuded of its surface soil by washing rains, and was cut up into gullies. Yet on this little bit of a patch of Lespedeza, during the whole of last summer, the owner kept two milch cows and one bull, seven hogs and six sheep. The cattle were in superior order the whole time; the cows afforded an abundant supply of milk and butter for the whole family; the sheep were fat; and the hogs, which got only a small feed of corn every night, grew well, kept in good condition, and by aid of the usual processes of fattening, made a fine supply of meat for the ensuing year.

Now, I know the above piece of ground well; have been over it time and agin; and am certain that, had it been broken up and sown in red or white clover, the seed would scarcely have germinated without an outly for manure of ten or fifteen dollars to the acre. Even with that expenses, it would not have supported the same stock for the time named. Nay, more than that: the same number of animals would have killed out the whole pasture in those clovers by the opening of the third season; whereas the Lespedeza is actually thicker than it was last year on the parts where the stock fed. It has also spread nearly as thick as it can stand over those parts where last year it was scarcely or not at all to be seen; so that the whole pasture is now almost completely covered with it.

Away, then, with red clover for general use on an extensive scale, on these soils, and in this latitude. It will not do. It is earlier than Lespedeza with us, and may, therefore, answer a good purpose for early soiling; but for summer pasturing it cannot at all compete with its new rival; and as for winter pasturing, I think we can scarcely succeed in sustaining our stock on a thing which is about as plentiful from the middle of December to the first of March as eder down on the back of a dorking.

It is true, the Japan clover, as seen in its uncultivated state along our waste places, is commonly short, and an experienced observer would naturally draw the conclusion that stock could derive but little benefit from it. Yet it is as tall and as thick set as the spear grasses are at the North and East in similar localities, and will afford quite as much nutriment during the season; for nothing that I have ever seen will endure a greater amount of grazing. Properly enclosed, and under equal cultivation, it is my belief that in this climate it will yield as great a weight of hay as timothy or redtop will in New England, or blue grass will at the West. This, however, is only a matter of opinion, as no one here has yet so cultivated it; but the fact that on our light lands, after a crop of wheat or oats, it attains a height of from six to twelve inches, and that in low, rich meadows it is found very often two and a half feet high, are sufficient indications of what it would do on deeply-plowed lands if stimulated by as great an amount of manure as northern farmers usually apply to the grain crops, with which their grasses are sown. But take it in its wild, uncultivated state alone, and it is the greatest blessing ever bestowed upon the South in the shape of grass.

T. S. W. Mott.

It is said that one of the most powerful remedies for bots in horses is a strong decoction of cake tea, made very sweet. It dislodges the bots instantly.

"Cotton Still King."

If any one is still disinclined to confess the truth that "cotton is king," and a great king, too, his doubts ought to be removed by the startling statement of the Manchester Cotton Supply Association, which is forced to acknowledge that "when the great cotton crop of 1866 was made in India, over 1,300,000 souls perished from starvation, produced from putting lands in cotton which should have been appropriated to breadstuffs." So, also, in Egypt, it is admitted, in 1865, "when a large attempt at cotton growing was made, some 350,000 of the population perished from actual starvation." The product of American cotton last year was 3,000,000, and next it ought to be 4,000,000, as it is discovered that white men and Chinese can grow cotton as well as colored people. As India, nor Egypt, no Africa, nor South America, can meet the needed supply of cotton, it is satisfactory to know that the United States can. Millions have been expended in exploring other fields, only to show the great value of American cotton, which is now more of a king than before the war. What, indeed, without it could the United States do in the needed work of reducing to a feeble extent the amount of our debt in Europe?

AMBROSIA.—Have ready a grated cocoanut and some oranges peeled and sliced. Put a layer of orange in your dish and strew sugar over it, and then a layer of cocoanut, then orange, and sprinkle sugar, and so on, till the dish is full, having cocoanut for the last layer. It should be prepared an hour or two before it is wanted for use. Pineapple can be substituted for the orange; some use both, but it is better with only one.

A Remedy for Club-Foot in Cabbage.

Last summer, in my grounds at Jersey City, where we have never been able to get two crops of cabbages successively without having them injured by club-foot, my foreman suggested to me the experiment with a bed of about half an acre, to be planted with Early Wakefield cabbage. One-half of this he proposed to manure at the rate of seventy-five tons per acre, with stable manure, the other half with flour of bone, at the rate of 2,000 pounds per acre. This was accordingly done in the usual way, by sowing bone dust on the ground after plowing, and then thoroughly harrowing in. During the month of May we could see no perceptible difference in the beds, but just as soon as our first hot days in June came, down wilted the portion that had been dressed with stable manure, showing a well-defined line the whole length of the bed, and on pulling the plants up we found that our enemy was at work, while in that portion that had been dressed by the bone dust not a wilted plant could be seen, but, on the contrary, the crop had most unusual vigor. This experiment has been to me one of the most satisfactory that I ever tried; it still further proves that the destructive insect cannot exist to an injurious extent in a soil impregnated with lime, and also proves that we have a most effective remedy in this valuable and protable manure.

It is estimated that the rainfall in the northern States is forty inches; the southern States, fifty; Minnesota, Western California, and Colerado, thirty; Nebraska and Utah, twenty; Kansas and Western Arizona, fifteen inches. This is a general average for fifteen years.

List of Premiums of the North Carolina Agricultural Fair.

DEPARTMENT FIRST—LIVE STOCK.

DIVISION I.—HORSES, &c.

CLASS I.—THOROUGHBRED.

Best Stallion over 4 years old....$25
Second best over 4 years old..... 15
Best Brood Mare over 4 years old 15
Second best over 4 years old..... 10
Best Stallion over 2 and under 4 years old..... 10
Best Mare over 2 and under 4 years old..... 10

In this class purity of blood being the highest point of distinction, a well-authenticated pedigree must, in every case, accompany each animal put on exhibition to compete for any of the above prizes.

CLASS II.—LIGHT DRAUGHT AND SADDLE HORSES.

Best Stallion over 4 years old...$20
Second best over 4 years old..... 10
Best Brood Mare over 4 years old 10
Second best over 4 years old..... 5
Best Brood Mare and Colt..... 10
Best Stallion over 2 and under 4 years old..... 10
Best Mare over 2 and under 4 years old..... 10
Best Saddle-Horse, mare or gelding..... 10
Second best, mare or gelding.... 5
Best pair of Carriage Horses matched..... 20
Second best, matched..... 10
Best Single-harness horse..... 10
Second best..... 5

In this class individual excellence in form, action, and disposition, will be regarded as chief points of merit.

CLASS III.—HEAVY DRAUGHT HORSES.

Best Stallion over 4 years old...$20
Second best over 4 years old..... 10
Best Brood Mare over 4 years old 15
Second best over 4 years old..... 10
Best Brood Mare and Colt..... 10
Best Stallion over 2 and under 4 years old..... 10
Best horse 5

In this class form, size, and docility, will be regarded as chief excellencies.

CLASS IV.—JACKS, JENNETS, AND MULES.

Best Jack, with approved certificates $20
Best Jennet, do..... 10
" Team of four Mules..... 20
" Pair of Mules..... 15
" Mule..... 10

DIVISION II.—TRIAL OF SPEED.

1. Half-mile heats, 3 in 5, to harness; premium, $150; entrance, $25; three or more to enter.
2. Half-mile heats, 3 in 5, to harness; premium, $100; entrance, $20; three or more to enter.
3. Half-mile heats, 3 in 5, to harness; premium, $50; entrance, $10; three or more to enter.
4. Half-mile heats, 2 in 3, to harness; for all colts and fillies foaled in 1865 or 1867; premium, $50; entrance, $10; three or more to enter.
5. half-mile heats, 2 in 3, to harness; premium, $50; entrance, $10; two or more to enter.
6. Best Pacing or Racking Horse, mare or gelding, either saddle or harness; premium, $25; entrance, $5; two or more to enter.
7. Best children's Pony, $5.
8. Mules; half-mile heats; 2 in 3, to harness or saddle; premium, $20; entrance, $10.

DIVISION III.—CATTLE.

CLASS I.—IMPORTED.

Best Bull.....$20
Best Cow..... 10

CLASS II.—DURHAM, DEVON, AYRSHIRE, ALDERNY, HEREFORED, AND GRADE.

Best Bull over 3 years old.....$10
Best Bull over 2 and under 3 years old..... 10
Best Bull over 1 and under 2 years old..... 5
Best Bull Calf..... 3
Best Cow over 3 years..... 10
Best Cow over 2 and under 3 years old..... 5
Best Heifer Calf..... 3

Sweepstakes.

Best Bull.....$20
Best Cow..... 10

CLASS III.—WORKING OXEN.

Best pair of Working Oxen.....$20

CLASS IV.—FAT CATTLE.

Best lot of Fat Cattle, not less than five.....$10
Best Fat Ox or Cow..... 5
Best Spayed Heifer..... 10

CLASS V.—MILCH COWS.

Best Milch Cow, giving not less than twenty quarts on exhibition...$20
Second best Cow, sixteen quarts. 10

Milker.

Best Milker, man or woman.....$10

DIVISION IV.—SHEEP AND GOATS.

CLASS I.—MERINO, COTSWOLD, OR SOUTHDOWN.

Best Bucks.....$20
" Ewes, not less than three... 15
" Lambs, not less than three. 10

CLASS II.—NATIVE OR GRADE.

Best Buck.....$20
" Ewes, not less than three... 10
" Lambs, not less than three. 5

CLASS III.—GOATS.

Best pair of Cashmere.....$20
Best pair of Alpaca..... 10

DIVISION V.—SWINE, POULTRY, &c.

CLASS I.—BERKSHIRE, CHESTER, WOBURNS, GRAZIER, BEDFORD, DUCHESS COUNTY, AND THEIR GRADES.

Best Boar over 2 years old.....$ 5
Best Breeding Sow over 2 years old..... 5
Best Breeding Sow over 2 years old, with not less than 4 pigs. 5
Best lot of Pigs under 10 months old..... 5

This class will be regarded chiefly for their size, form, and fitness for pork hogs.

CLASS II.—SUFFOLK, ESSEX, NEAPOLITAN, CHINESE, GUINEA, SNAP-DRAGON, AND THEIR SHADES.

Best Boar over 2 years old.....$ 5
Best Breeding Sow over 2 years old..... 5
Best Breeding Sow over 2 years old, with not less than 4 pigs. 5
Best Boar and Sow under 2 years old..... 5
Best lot of Pigs under 10 months old..... 5

In this class respect will be had chiefly to fattening qualities.

CLASS III.—NATIVE.

Best Boar over 2 years old.....$10
Best Breeding Sow over 2 years old..... 10
Best Breeding Sow with 4 pigs.. 10
Second best with 4 pigs..... 10
Best Boar or Sow..... 5
Second best Boar or Sow..... 3
Best lot of Pigs under 10 months old..... 5
Best lot of 10 fat hogs of any kind..... 10
Best Fat Hog..... 5

Sweepstakes.

Best Boar.....$10
Best Sow..... 5

CLASS IV.—POULTRY.

Best pair Shanghais.....$ 3
" Dorkings..... 3
" Polands..... 3
" Brahmas..... 3
" Cochin..... 3
" Black Spanish..... 3
" Game..... 3
" Cross-breed..... 3
" Sebright..... 3
" Wild Turkeys..... 3
" Domestic Turkeys..... 3
" China Geese..... 3
" Common Geese..... 3
" Muscovy Ducks..... 3
" Rouen Ducks..... 3
" Alyesbury..... 3
" Peafowls..... 3
" Pied Guinea Fowls..... 3
" White Guinea Fowls... 5
Best exhibition of pigeons..... 5
Best and largest variety of poultry by one exhibitor..... 5

CLASS V.—BEES AND DOGS.

Best Swarm of Italian Bees.....$ 5
Best Swarm of Common Bees.... 5
Best Watch Dog..... 5
Best Shepherd's Dog, trained.... 5

DEPARTMENT SECOND.—AGRICULTURAL AND OTHER PRODUCTS—DIVISION I.—PLANTATION AND FARM PRODUCTS, RAISED BY EXHIBITOR.

CLASS I.—GRAIN AND SEEDS.

Best variety of Bread Corn, one bushel.....$ 3
Best variety of Stock Corn, 1 bushel..... 3
Best variety of Wheat, 1 bushel. 3
" Oats, 1 bushel... 3
" Rye, 1 bushel.... 3
" Barley, 1 bushel. 3
" Rice, 1 bushel.... 3
" Field Peas, 1 do. 3
" Ground Peas, 1 do 3
Best variety Grass Seeds, adapted to the South for hay or grazing..... 5
Greatest variety of above articles raised on one farm..... 10

CLASS II.—COTTON, HEMP, &C.

Best two stalks of cotton as samples.....$ 2
Best specimen of Cotton, 50 lbs., in seed..... 5
Best specimen of Hemp, prepared or dressed..... 3
Best specimen of Flax, prepared or dressed..... 3
Best specimen of Broom Corn, 20 pounds..... 3
Best specimen of Leaf Tobacco, not less than 10 pounds..... 3
Best specimen of Maple Sugar... 3
" Sorghum Sugar..... 3
" Virgin Dip Turpentine, 1 barrel, as sample..... 3
Best specimen of Rosin..... 4
For the best specimen of Linseed, Turpentine, Castor, Cotton Seed, Olive, Fennel, or any other variety of Oil, made in the State and prepared by the exhibitor..... 3
Best specimen of Sweet Potatoes, 1 bushel as sample..... 3
Best specimen of Irish Potatoes, 1 bushel as a sample..... 3

CLASS III.—BUTTER AND CHEESE.

Best jar of Fresh Butter, not less than 5 pounds..... 3
Best firkin of Butter, 6 months old, not less than 20 pounds... 5
Best New Cheese..... 3
Best Cheese, 12 months old..... 5

The process of making and preserving butter and cheese must be given in full by the exhibitor.

CLASS IV.—FLOUR, MEAL, BREAD, &C.

Best specimen of Wheat Flour, one barrel, ground in the State from native wheat.....$10
Second best specimen of Wheat Flour, 1 barrel, ground in the State from native wheat..... 5
Best specimen Corn Meal, 1 bbl. 5
Best specimen Rice Flour, half barrel..... 5
Best specimen Buckwheat Flour, half barrel..... 3
Best specimen Oat and Rye Meal, half barrel..... 3
Best specimen of Starch, from wheat, potatoes, &c., 5 lbs..... 3

DIVISION II.—HORTICULTURAL PRODUCTS.

CLASS I.—FRUITS ADAPTED TO THE SOUTH.

Best and greatest variety Apples.$ 5
" " " Pears.... 5
" " " Peaches. 5
" " " Quinces. 5
" " " Figs..... 5
" " " Grapes... 5
Best and greatest variety Cranberries..... 5
Best specimen of Native Wines, of each, not less than half doz. bottles..... 10

CLASS I.—FRUIT TREES, &C., ADAPTED TO THE SOUTH.

Best and largest variety of Apple Trees.....$ 5
Best and largest variety of Pear Trees..... 5
Best and largest variety of Peach Trees..... 5
Best and largest variety Grapevines..... 5
Best and largest variety Strawberry Vines..... 3
Best and largest variety Rasp-

berry Vines.....$ 3
Best and largest variety Gooseberry Vines..... 3
Best and largest variety of Cranberry Vines..... 3
Best and largest variety Blackberry Vines..... 3

CLASS III.—VEGETABLES.

Best six stalks of Celery.....$ 2
" specimens Cauliflower... 2
" " Broccoli..... 2
" " Cabbage..... 2
" " Egg Plants... 2
Best variety of Squash..... 2
Best variety of Cucumbers for Pickling..... 2
Best peck of Onions..... 2
" half peck of Tomatoes..... 2
Best Sugar Beets, Carrots, Parsnips, half dozen each variety.. 2
Best Pumpkins..... 2

DIVISION III.—SALT PROVISIONS.

CLASS I.—PLANTATION.

Best Pickled or Mess Beef, half barrel.....$ 5
Best Pickled or Mess Pork, half barrel..... 5
Best half dozen Bacon Hams, regardless of age..... 5
Best half dozen Mutton Hams... 5

Exhibitors must state in full, in writing, the mode of pickling the beef and pork, and curing and preserving the bacon.

CLASS II.—WATER.

Best half barrel Roe and Cut Herrings.....$ 5
Best half barrel Shad..... 5
" half barrel Mullet..... 5
" half barrel Mackerel..... 5

DEPARTMENT THIRD—MECHANICS

DIVISION I.—IMPLEMENTS MADE IN THE STATE.

CLASS I.—PLOWS AND PLOWING MATCH.

Best Side-hill Plow.....$10
" Double Mould Board Plow. 5
" Cast Mould Board Plow, 1 horse..... 10
Best Cast Mould Board Plow, 2 horse..... 10
Best Wrought Mould, Bound Plow, 1 horse.....$10
Best Wrought Mould Board Plow, 2 horse..... 10
Best Subsoil Plow..... 10
" Cotton Plow..... 10
" Sulkey Plow..... 10

The plows to be tested by an actual trial, under the following rules:

1. The plows to be held by the competitors or persons appointed by them.

2. Each plow shall open and plow four rounds, back furrowing.

The following points will be considered by the committee in determining the merit of the plows:

1. Weight of plow.
2. Breadth of furrow.
3. Depth of furrow.
4. Simplicity of structure, material, workmanship, durability, and price.

Plowing Notice.

Best Plowman.....$20
Second best Plowman..... 10

Each plowman to find his own team. Plowman to drive.

CLASS II.—IMPLEMENTS.

Best Cotton Scraper.....$10
Best specimen of a Sweep..... 5
Best specimen of a Toothed Cultivator..... 5
Best specimen of a Toothed Harrow..... 5
Best specimen of Toothed Horse Rake..... 5
Best specimen of Iron Roller, smooth..... 5
Best specimen of Iron Roller, pegged..... 5
Best specimen Weeding Harrow Plow..... 5
Best specimen of a Farm Gate... 5
Best specimen of Fruit Ladder... 5
Best specimen Extension Ladder..... 5
Best specimens and greatest variety of Agricultural Implements manufactured in the State by the exhibitor, or under his supervision..... 20

Best made anywhere.....$10
" Rakes, half dozen..... 5
" Sneathes, half dozen..... 5
" Grass Blades, half dozen... 5

CLASS III.—FARM VEHICLES, &C.

Best 4 or 6 horse Road Wagon..$20
" 2 horse Road Wagon..... 10
" 1 horse Road Wagon..... 5
" 1 horse Cart, tumbrel..... 5
" 1 Ox Cart and Yoke..... 5
" Wheelbarrow..... 5
" Dumping Wagon..... 5
" pair Wagon or Plow Hames 2
" Cart Saddle..... 2
" Ox Cart Wheels..... 3
" 2 horse Pleasure Carriage.. 25
Best Phæton, Rockaway, or Top Buggy..... 15
Best Open Buggy or Sulky, each 10

DIVISION II.—MACHINERY.

CLASS I.—STEAM POWER.

Best Engine for agricultural purposes, at work on the ground.$25

CLASS II.—HORSE POWER.

Best Sweep Horse Power.....$15
" Railway Horse Power..... 15
Best Saw and Grist Mill, Corn and Cob Crusher, and Threshing Machine, each..... 15
Best Broadcasting and Drilling Machine, for grain or grass... 10
Best Broadcasting Machine for sowing bone dust, lime, &c.... 10
Best Ditching Machine..... 10
" Cotton Gin..... 20
" Reaping Machine..... 20
" Mowing Machine, for grass 10
" Hay Press..... 10
" Cotton Press..... 20
" Brick Machine..... 20
" Hay Rake..... 10
" Best Cotton Chopper..... 10

CLASS III.—HAND POWER.

Best Fanning Machine.....$ 5
" Corn Sheller..... 5
" Straw and Shuck Cutter... 5
" Corn Planter or Drill..... 5
" Wheat Planter or Drill..... 5
" Shingle Machine..... 5
" Smut Machine..... 15
Best Churn.....$ 5
" Sewing Machine..... 10
" Sausage Cutter and Stuffer. 5
" Grain Cradle..... 5
" Plantation Mill..... 3
" Lifting Pump..... 5
" Forcing Pump..... 5

DIVISION III.—ARTS.

CLASS I.—SADDLERY, &C., MADE IN THE STATE.

Best set of Carriage Harness.....$15
Best set Buggy or Sulkey Harness 10
Best Gent's Saddle, Bridle, and Martingale..... 10
Best Ladies' Saddle, Bridle, and and Martingale..... 10
Best set 4 horse Wagon Harness. 10
" 2 horse Wagon Harness. 5
" 1 horse Wagon Harness. 3
" Cart Harness..... 3
" Plow Harness..... 3
" Halter and Collar or Pad... 3

CLASS II.—CABINET WORK MADE IN THE STATE.

Best Bedstead.....$ 5
" Cradle or Crib for children. 3
" Rocking Chair..... 3
" half dozen Sitting Chairs... 3
" Centre Table..... 3
" Washstand..... 3
" Sofa or Settee..... 5
Best Wardrobe, Sideboard, or Bureau..... 5
Best Desk, Bookcase, &c..... 5
Best Window Sash and Blinds, each..... 5
Best Pannel Boor..... 5

CLASS III.—SHOES, HATS, &C., MADE IN THE STATE.

Best pair of Gentleman's Boots..$ 3
" pair of Gentleman's Shoes.. 3
" half dozen Brogans..... 3
" Dress Hat, silk or fur..... 2
" Plantation Hat..... 3
" half dozen Wool Hats..... 2
" Straw or Grass Hats..... 3
Best made Gentleman's Coat, Pants, and vest..... 10

CLASS IV.—SUNDRIES MADE IN THE STATE.

Best lot of Guns.....$ 5
Best Stone, Glass, or Earthenware, each..... 5

Best Cast (hollow) Ware, as pots, kettles, &c.....$ 5
Best Wood-ware (hollow), as buckets, tubs, keelers, &c..... 5
Best Casks, Barrels, &c..... 5
" Leather, Sole, Kip, and Calf 5
" Side of Harness Leather.... 3
Best Dressed Buck, Sheep, or Goat Skins..... 5
Best lot of Baskets for farm use. 5
" lot of Tinware..... 3
" lot of Edge Tools..... 10
Second best lot of Edge Tools.... 5
For the best and greatest variety of Mechanics Tools..... 10
Best lot Manufactured tobacco, chewing..... 10
Best lot Manufactured Tobacco, smoking..... 5
Best box Cigars..... 5
" box Tallow Candles..... 5
" long-handled Brooms, 1 doz. 5
Best specimen of Pressed Brick, 1 dozen..... 5
Best specimen of Fire Brick, 1 dozen..... 5
Best specimen Dressed Stone..... 5
" Mantle (N. C.) Marble..... 5
" Axe Helves, half dozen..... 5
" Beehive..... 5

DIVISION IV.—MANUFACTURES.

Best piece (1 yard) Broadcloth...$10
" " Cassimere... 5
" " Satinette..... 5
Best piece (1 yard) Woollen Jeans 5
Best piece (1 yard) Linsey or Kersey..... 5
Best piece (1 yard) Flannel, plain and twille..... 5
Best pair of Blankets..... 5
" pair of Felt Blankets..... 5
Best piece (1 yard) Linen, bleached..... 5
Best piece (1 yard) Linen, brown 3
" piece (1 yard) Tow Cloth... 5
" piece (3 yards) Osnaburgs.. 5
Best piece (3 yards) Shirting and Sheeting..... 5
Best piece (3 yards) Bed Ticking..... 5
Best piece (3 yards) Cotton Jeans 5
Best Cotton Sacking, 30 yards...$ 5
" bale Cotton Yarn, all Nos... 5
" lot Cotton Twine..... 2
Best Paper—printing, letter, cap, &c..... 5
Best Coil of Rope—hemp, cotton, or bear grass..... 5
Best Mattress—hair, moss, shuck, or cotton..... 5

In all classes of this division the premiums affixed to each article will also be given for the best specimens, wherever made.

DEPARTMENT FOURTH.—FLORAL HALL.—DIVISION I.—BREAD, &c.

Best specimen Flour Bread, loves.$ 2
Best specimen Flour Rolls, half dozen..... 3
Best specimen Corn Bread, three loaves..... 2
Best specimen Crackers—soda, butter, and water, 10 pounds. 5
Best Sponge Cake..... 2
" Fruit Cake..... 2
" Plain Cake..... 2
Best specimen Honey, strained, half gallon..... 2
Best specimen Honey, in comb, 5 pounds..... 5
Best Jellies, Preserves, Pickles, Jams, Catsups, Syrups, Cordials, &c., made in the State... 2
Best and greatest variety made and exhibited by same individual..... 5
Best specimen of the following dried fruits: Peaches, Pears, Figs, and Apples, of each not less than half bushel..... 2
Best specimen of Grapes, Plums, Cherries, and Whortleberries, each not less than 10 pounds.. 2
Best specimen and greatest variety of the above dried fruits, made and exhibited by same individual..... 4
Best box of Hard Soap, 10 lbs... 5
Best 10 pounds of Soft Soap, home made..... 5
Best and largest collection Fine Soaps..... 10

DIVISION II—HOUSEHOLD FABRICS

Best Counterpane.....$ 3
" Quilt, cotton..... 5
" Quilt, silk..... 3
" Home-made Carpet..... 3
" pair Home-made Blankets.. 3
" Hearth Rug..... 3
" pair Yarn Hose..... 2
" pair Cotton Hose..... 2
" Woollen Shawl..... 2
" Foot Mats..... 2
Best piece (10 yards) Woollen Cloth..... 3
Best piece (10 yards) Rag Carpet 3
Best Knit Counterpane..... 10
" Gentleman's Shirt..... 3

DIVISION III.—FANCY WORK.

CLASS I.—CROCHET WORK.

Best Tidy.....$ 3
" set Table Mats..... 3
" Shawl..... 3
" Toilet Mat..... 3
" Collar..... 3

CLASS II.—MILLINERY.

Best and handsomest Velvet Bonnet.....$ 3
Best and handsomest Silk Bonnet..... 3
Best and handsomest Straw Bonnet..... 3
Best and handsomest Child's Hat 2
" " Ladies' Cap 2
" " Head Dress 2
" " Riding Hat 2

CLASS III.—WAX, BEAD, &C., WORK.

Best specimen in Fruit, wax.....$ 3
" " Flowers, wax.. 3
" " Beads..... 3
" " Paper Flowers 3
" " Shells..... 3

CLASS IV.—WORKS OF ART.

Best Painting, oil.....$ 5
" " water colors..... 5
" Pine Burr Basket..... 3
" Drawing, crayon..... 5
" Collection Cromos....*Certificate*
" Pine Burr Picture Frames. 3

DIVISION IV.—FLOWERS, &c.

Best specimen of any variety.....$ 2
Best 12 varieties of Flowers, one of each..... 4
Two best 12 varieties of Flowers, one of each.....$ 2
Best collection variegated Leaf Plants..... 4
Best collection indigenous Plants 4
Best Bouquet..... 3
Best Design..... 3
Best handsomest Vase of Dried Grasses..... 2
Best Basket with Flowers..... 2
Best Vase with Flowers..... 2

Discretionary Premiums in this department.

DEPARTMENT FIFTH—MINERALS.

For the best collection of different Minerals of the State, including coal, iron ore, copper ore, limestone, marble, sandstone, marl, peat, soil, &c....*Discretionary Pre.*

DEPARTMENT SIXTH—FIELD CROPS.

To be awarded by the Executive Committee at a meeting to be held for that purpose in December next.

Best crop of Wheat, not less than five acres, nor less than 40 bushels per acre.....$20
Second best crop of Wheat, not less than five acres, nor less than 40 bushels per acre..... 10
Best Crop of Indian Corn, not less than five acres, to be shelled and weighed between the 15th November and the 15th December, not less that 100 bushels per acre..... 20
Second best crop of Indian Corn, not less than five acres, to be shelled and weighed between the 15th November and the 15th December, not less than 100 bushels per acre..... 10
Best crop of Barley, not less than one acre, nor less than 50 bushels per acre..... 10
Best crop of Rye, not less than one acre, nor less than 40 bushels per acre..... 10
Best crop of Oats, not less than one acre, nor less than 50 bushels per acre..... 10

Best crop of Buckwheat, and not less than one acre, nor less than 30 bushels per acre.....$10
Best crop of Rice, not less than ten acres, nor less than 75 bushels per acre..... 10
Best crop of Beans and Peas, not less than one acre, nor less than 25 bushels per acre..... 10
Best crop of Ground Peas, not less than one acre, nor less than 70 bushels per acre..... 10
Best crop of Cotton, on not less than four acres..... 20
Second best crop of Cotton, on not less than four acres..... 10
Best crop of Pea-vine Hay, raised on two acres, one bale to be sent as a sample to the State Fair..... 5
Best crop of Native Grass Hay, raised on two acres, one bale sent as sample..... 5
Best crop of Foreign Grass Hay, raised on two acres, one bale sent as sample..... 5
Best crop of Sweet Potatoes, on not less than half an acre, nor less than 300 bushels per acre 10
Best crop of Irish Potatoes, not less than half an acre, nor less than 400 bushels per acre..... 10
Best crop of Turnips, not less than half an acre, nor less than 500 bushels to the acre..... 10
Best crop of Turnips raised per acre..... 5
Best crop of Beets, not less than half an acre, 60 pounds per bushel, nor less than 400 bushels per acre..... 5
Best crop of Carrots—with same conditions as for beets..... 5
Best crop of Corn-fodder, not less than one acre, with an account of culture, preservation, &c.... 5
Best crop of Tobacco, not less than four acres..... 10
Best half acre of hops, with full account of cultivation and preservation..... 10
Best half acre of Flax—with same account as last.....$ 5
Best half acre of Hemp—with same account as last..... 5
Best half acre of Clover Seed—with same account as last..... 5
Best half acre of Timothy Seed—with same account as last..... 5
Best half acre of Broom Corn—with same account as last..... 20
Best half acre of Flaxseed, not less than 12 bushels per acre.. 5
Best half acre of Mustard Seed.. 5
Best average product to the acre throughout the entire crop of wheat, tobacco, corn, or cotton..... 25
Best crop of Dora Corn, not less than one acre..... 5
Best specimen of Ozier Willow, *Discretionary premium.*

Statements to be made by Competitors on Field Crops.

1. The land must be measured by some competent person, who shall make affidavit of the accuracy of the measurement and the quality of the ground.

2. The applicant shall make affidavit, accoring to the forms annexed, to the quantity of grain raised on the ground, entered on the premium list, which affidavit must accompany the application for premiums, together with a sample of the grain.

3. The principal object of the Society being to promote profitable cultivation, it does not offer premiums for crops produced by extravagant expenditure, therefore a detailed certified account of the expense of cultivation must be made, the expense of labor and manure stated, and the kind of manure used.

4. The kind and condition of soil; the quantity and kind of seed used. the time of planting or sowing stated.

Samples of grain and vegetables produce to be exhibited at the State Fair, where practicable, and also to

be sent to the Executive Committee at Raleigh prior to the meeting of the committee in December.

5. The grain must either be weighed or measured in a legal half bushel, corn to be measured in the ear, and an average specimen of not less than twenty bushels of ears shelled, cleaned, and weighed or measured, as above, after the 15th of November, and the number of bushels thus estimated stated in the affidavit.

Forms of Affidavit.

——— County, S. S. — A. B., being duly sworn, says he accurately measured the land upon which C. D. raised a crop of —— the past season, and the quantity of land is —— acres, and no more.

[Signed] A. B.

Sworn to before me this — day of —, 186—.

——— County, S. S. — C. D., being duly sworn, says he raised a crop of —— the past season upon the land measured by A. B., and that the quantity of grain raised thereon was — bushels, and no more (or measured in a seal half bushel, as the case may be), and that the statements in regard to the manner of cultivation, &c., are correct, to the best of my knowledge.

[Signed] C. D.

Sworn to before me this — day of —, 186—. ———, Justice.

DEPARTMENT SEVENTH—EXPERIMENTS AND ESSAYS.

For each of the two best experiments or series of experiments on the following subjects, a premium, as follows:

1. Effects (in profit or loss) of the usual mode of saving corn fodder, by stripping the green blades and cutting off the tops.....$10
2. Costs and effects of subsoil plowing, under different circumstances of soil and subsoil..... 10
3. Action or non-action of lime as manure above the falls of the tide-water rivers.....$10
4. Action or non-action of gpysum below the falls of the tide-water rivers, and on soils respectively rich and originally poor, and on the latter, after as well as before their being made calcareous..... 10
5. Cost and effects of bone dust (or phosphate of lime) as manure..... 10
6. How late in reference to the growth, the last tillage (by plow or cultivator) should be given to corn for the best product, and whether the said last tillage should be shallow or deep..... 5
7. Best series of comparative experiments in the cultivation of corn..... 10
8. Benefits and products of guano, compared to costs, to be tested by not less than three different experiments, made under circumstances more or less different..... 10
9. Benefits or profit of preserving or applying human excrements as manure, whether prepared for sale and distant transportation or otherwise, but the whole operation to be in North Carolina..... 10
10. Tide marsh mud, or swamp muck or peaty soil (either kind to be accurately described and characterized), as manure, in compost with lime or otherwise..... 10
11. Value of charcoal as an aid to fertility..... 5
12. Value of sulphate of barytes as a manure, especially for clover..... 5
13. *Tobacco.*—Culture, cost, and profits of cultivating, and comparative effects on production, from different distances

of planting, modes of priming, topping, &c., comprising at least three different experiments.....$10

14. Cultivation and comparative feeding value of rye..... 5

ESSAYS OR WRITTEN COMMUNICATIONS.

For each of the best five on any of the following subjects, a premium, as follows:

1. On improving and enriching poor land, whether naturally poor or naturally rich, or good, and subsequently exhausted by severe cropping..... 5
2. On draining..... 5
3. On rotation of crops..... 5
4. On the accumulation, preparation, and application of the stock-yard and stable manure 10
5. On the "green sand" or gypseous earth of lower North Carolina as manure, and the facts and causes of effect or non-effect..... 5
6. On the properties and value of the Southern Pea (or cornfield pea of any variety), and the culture thereof, whether for saving the pea ripened or plowing under the growth, green or dry, for manure, and as a preparation for wheat or other grain crops..... 5
7. On the comparative profit of planting and farming, and of the two combined—improvement of land being considered 10

The *Scientific American* says if ladies would have corned beef juicy after it is cold, and not dry as a chip, they should put it into boiling water when they put it on to cook, and they should not take it out of the pot, when done, until cold.

The castor oil manufactory at Gonzales, Texas, has made a shipment of their oil to New Orleans, which there brought $2.50 per gallon.

Bugs in Peas.

Dr. I. P. Trimble, of Newark, N. J., says that the bug or weevil in the pea is well nigh universal, at least over wide sections of the country. In the northern part of New York and New England he does not usually affect the peas so seriously. Hence seed peas ought to be raised north of Albany and Boston. A very small egg, that soon becomes a minute worm, is laid on the pea-pod. The little animal eats its way into the middle of the pea, and slowly matures into the weevil that we find in these peas. When the pea is green, he is so small as to be below notice. But when the ripe pea is brought to market, the size of the worm, and afterwards of the bug, is such as to make most dried peas unfit for the table. Fowls prefer them, and they will generally do as well for seed as sound peas. They do not affect the earliest of our peas, nor the very late varieties, but the Marrowfats and English Mammoth are always infested with them. As nineteen twentieths of our pea crop is eaten green, the difficulty is one of little practical importance.—*American Agriculturist.*

To Color Yellow on Cotton.—Wet six pounds of goods thoroughly, and to the same quantity of water add nine ounces of sugar of lead, and to the same quantity of water, in another vessel, add six ounces of bi-carbonate of potash. Dip the goods first into the solution of sugar of lead, and next into that of potash, and then again into the sugar of lead. Wring out dry, and afterwards rinse in cold water.

To Dye Scarlet.—Dip the cloth in a solution of alkaline or metallic salt, then in a cochineal dye, and let it remain some time, and it will come out permanently colored.

The Cotton Supply.

REVIEW BY THE LONDON TIMES.

The London *Times*, of the 14th ultimo, has an editorial on the subject of the cotton supply, which was transmitted by cable, wherein it says:

A curious aspect has just been given to the question of the cotton supply. Just as the association for promoting this object is holding its usual meeting, a merchant writes us that Manchester alone is responsible for the scarcity it suffers. With all its wealth, enterprise and confidence it has never invested a penny in the cotton field. The conclusion of the outside world obviously is, that those who know most about cotton planting can never pay. Their caution acts in others, and cotton culture is discouraged. If the Manchester spinners would establish a cotton company, with a large capital employed in the heart of India, things would be different; but they stand aloof and refuse to risk their money in adventure, and when cotton comes to them they drive it down to a losing point.

The association urge the establishment of large cotton fields in Ethiopia, but the recommendation, though interesting to growers, has little effect to cause more cotton to be grown. Cobden and his friends maintained it was not the duty of the manufacturer to concern himself with the South, but merely to offer a sure and steady market for the produce. If India undersold America by a farthing in the pound on equal quality, she would command the Lancashire market.—The true policy of the manufacturer was to keep the market open and give perference to the best cottons.

How these doctrines ended we need not say, but the singular complaint of our correspondent lends illustration to argument. He resents the practice of the manufacturer in driving down the price. It is not natural for the buyer to cheapen the article. Does not the remark strengthen the argument that the same people ought not to be buyers and sellers. His figures state that the aveage Indian cotton, formerly bringing four pence per pound, now brings ten pence, and it may be many years before it is lower than seven pence. If this means that seven pence would remunerate and satisfy Lancashire, the mighty question may be near its solution. Remembering that the cardinal question is price, and that cotton stuffs can be sold to the markets of the world, and that the money to recompense the grower and spinner comes from the pockets of the weaver, it is useless to grow and spin if it cannot be sold in quantity and at prices to remunerate all concerned.

Up to the time of the American war these conditions were fulfilled. The South produced, and Lancashire manufactured so cheaply that the article commanded the markets of the world. The price of India cotton is now two and a half times greater than formerly, which is enough to demolish the whole trade. No wonder that looms are idle. Cheap goods and dear cotton are incompatible. Until cheap goods are produced trade cannot revive. If seven pence pays the grower, there is no reason why industry should not revive. A protective tariff will not always prevail.

Cotton is now at 10 pence instead of 4 pence, because American competition is reduced. The price can only be abated by a return to large and more regular supplies. If India be our feeder it can only be on terms of free and open trade. Cotton-growers must be prepared for a revival of American industry and the competition of the whole world. In such a race Indian agriculture and British industry will be established.

The Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S. DANCY, - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

$2 PER ANNUM, IN ADVANCE.

TARBORO', N. C., OCTOBER, 1869.

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Advertisements on cover pages will be charged double rates.

Club Rates:

5 Copies	$ 8 00
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15 Copies	22 00
20 Copies	30 00
30 Copies	45 00

Persons sending us clubs of five and more will be furnished one copy for one year free of charge.

Average range of Thermometer at Tarboro', N. C., for the month of August—78 degrees at 7½ A. M. The month as a whole hot and dry; latter part of month very hot, 21st and 22d the mercury rising as high as 98 degrees. Cotton crop much injured by drought; portions of the county estimated injury from one-third to one-half.

To our Patrons and Friends.

With this number of the RECONSTRUCTED FARMER we come to the middle of the first volume, with a number of intelligent readers.

But as we desire that the number of our subscribers may increase, and regard this as an opportune occasion, we *earnestly* call upon our friends in all directions to use some exertion towards extending the circulation of our paper.

Each one of our subscribers could send us an additional subscriber without any inconvenience whatever.

We will furnish back numbers to any subscribers, or, if they prefer, we will send the paper to them the next six months for one dollar.

We commenced this paper for no other purpose than to establish in North Carolina, on a firm basis, a journal which should prove the exponent of the agricultural interest of the State.

To do this we desire our sheet to go into every neighborhood in the State, and also to have every interest discussed through its columns.

In order that all portions of the State may know the advantages, as well as the disadvantages each section of the State labors under, it is necessary that the corn, cotton, tobacco, rice, small grain and stock-raising regions should know what a grand old State North Carolina is, in soil and climate, for the various productions.

How many have emigrated from North Carolina, in search of better fields to produce cotton, when in their native State they could have done better.

Therefore, we offer our paper as a medium to the Eastern, Middle and Western farmers, through which they may communicate their views in regard to the various productions, as well as the soil and climate of the State.

We hope the farmers in the various parts of the country will com-

municate their experience to our journal, thereby making it a sure guide to the general interest of the State.

All who favor us with communications which we make use of will be entitled to one paper free of charge.

We appeal to the farming interest to come to our aid in sustaining this journal. We are running it at a loss at present, but we intend to stand up and continue its monthly issue, believing we will ultimately be successful. We request all in arrears to us to come up with the cash.

Cotton Crop.

We are satisfied from all the information we can gain, that the cotton crop is much shorter than was anticipated, in consequence of an unfavorable spring, dry summer, rust and army worm.

Therefore, we suggest to our readers the propriety of not being imposed upon by speculators and capitalists, who may conspire to reduce the price much below its real value.

It is said that India and other countries have made a large crop, and what is lost by the shortness of the crop in the South, will be made up by an excess in those foreign cotton districts.

Cotton planters be not deceived; if cotton should fall much below the present price, take it out of the market, and next spring or early summer you will see that you acted wisely.

You certainly have the reins in your own hands, and none are so blind but can see that the British press is much concerned about the supply of the article.

Every week brings leading articles and a large number of correspondents are devising plans for increasing the amount of the raw material.

It is plain that they know there is an insufficient supply, which they regard as a calamity.

We see a writer in the London *Times* holds forth the idea that the capitalists and manufacturers of Great Britain should invest their capital in the Southern States of America, and not in India, as here they could succeed; whereas experience has shown that past investments have not paid in India.

This writer holds that it would be the height of folly for the Southern States to make five millions of bales of cotton, requiring double the land, labor and expense, when half that amount will sell for as much.

The question naturally arises where are these capitalists to invest their capital in co-operation with the cotton growers?

They have tried India and other countries and failed, after spending large amounts.

One thing they know as well as we: there is one place in the world where cotton raising is not an uncertain experiment, and where planting never fails to be successful.

They also know there is a vast area of land that is not in cultivation, a full sufficiency, if properly cultivated, to produce double the quantity to supply the present wants of the world.

This, then, is the country to which we predict they will turn their attention to raise the needful supply.

This Southern country will yet prove to be the Eden of the world, notwithstanding Great Britain and the Northern States placed the negro here as a serpent which has not only destroyed our peace for the last nine years, but it seems the negro has ceased to be the cotton producer he formerly was, and the result is, these same people, in the course of a few years, will have paid us that which they had no idea of the full value of our negroes.

In a few years the negro will be gone, and we shall have altogether a different and better race, producing none the less cotton; but, on the contrary, we will have a vast amount of capital invested in manufacturing the raw material here and exporting it to them, saving the freight, commissions and stealage, to and from, as it has been in the past and is now the case.

If we are not mistaken, Mr. Wendell Phillips, in a speech shortly after the close of the war on Southern soil, said that the Southern people had not lost anything by the emancipation, for he contended the South had kept the negro as the man who raised, and kept the cow for some one else to milk; meaning, unquestionably, that we raised and worked him, but the North and Great Britain got the profit.

This we believe to be true.

The great object with them now is to cheat us out of the profits on our cotton, by the great crop produced by India and other countries.

Price your own cotton, and keep it; there is nothing to hinder you from getting it as they are compelled to have it.

Take their gold and invest it in improving your farms and manufactories, as you formerly did in negroes and in a few years you will be surprised at your wealth and power.

The Resources of North Carolina.

Messrs. Bannister, Cowan & Co., real estate and financial agents of New York and Wilmington, have published a very interesting work with the above title. It abounds in useful information about the agricultural, mining and manufacturing interests of the State. The soil and climate also are not forgotten. No one can read the work without being impressed with the unsurpassed resources of soil, climate and water-power, that are as yet hidden from the public view. To the passing traveler it is an excellent guide; to the native North Carolinian it is a book worthy a high shelf in his library, and to the excursionist in pursuit of a new home it is simply invaluable. The statistics of crops and the various statements made therein are well known truths to intelligent North Carolinians. All the errors we notice (and we think them entirely typographical) are against the State, which shows they are not disposed to exaggerate matters. For instance: the cotton crop of 1860, as taken from the census of that year is put down at 145,514 bales,

which, they say, at 25 cents per pound, would amount to $1,455,140, when it should be $14,551,400.

We commend this work to readers of all classes desiring truthful information about the resources of North Carolina; and we most cheerfully recommend this firm as reliable and safe agents through whom parties can negotiate.

North Carolina Agricultural Society.

We call attention to the liberal premium list of the ninth annual Fair of the North Carolina Agricultural Society, to be held in Raleigh on the 19th, 20th, 21st, and 22d of October. The energetic President, aided by his Executive Committee, have a fine programme for the occasion. The State Geologist, Professor Kerr, delivers the address. We are pleased to see the revival of this State institution under such favorable auspices, and predict much usefulness resulting from it to every class of our population. Long live the Agricultural Societies everywhere.

The Cape Fear Agricultural Association.

This Association, gotten up by some of the most enterprising minds of Wilmington and vicinity, holds its first annual fair in the city of Wilmington on the 16th, 17th, 18th, and 19th November, proximo. It comes off just a month after the State Fair, and at a season when the climate of Wilmington is delicious, and when the town is usually full of tropical fruits. The Hon. George Howard, of Edgecombe, delivers the address, and we know our Cape Fear friends have shown good taste and judgement in the selection of their orator for the occasion. We hope and believe Edgecombe will be strongly represented.

Labor.—None so little enjoy life, and are such burdens to themselves, as those who have nothing to do. The active only have the true relish of life. He who knows not what it is to labor, knows not what it is to enjoy. Recreation is only valuable as it unbends us; the idle know nothing of it. It is exertion that renders rest delightful, and sleep sweet and undisturbed. That the happiness of life depends on the regular prosecution of some laudable purpose, or lawful calling, which engages, helps, and enlivens all our powers, let those bear witness who, after spending years in active usefulness, retire to enjoy themselves; they find leisure a burden rather than a pleasure.—*Farmers' Journal, Lexington, Ky.*

To Remove Stains from Broadcloth.—Take an ounce of pipe clay, which has been ground fine, mix it with twelve drops of alcohol and the same quantity of spirits of turpentine. Whenever you wish to remove any stains from cloth, moisten a little of this mixture with alcohol and rub it on the spots. Let it remain till dry, then rub it off with a woolen cloth, and the spots will disappear.

Large Crop of Wheat.—Mr. Meem will make on his Mount Airy estate, in Shenandoah county, Va., from 10,000 to 12,000 bushels of wheat. During harvest he had five reapers going, followed by fifty hands.—*Maryland Farmer.*

Horticultural Department

Rev. J. B. Cheshire, D. D...Editor.

Mulching.

The long drought of the past summer has given the vitality of shrubs and trees a very severe trial, and many of them have died under this unusual absence of rain. In a climate like ours, subject to dry spells of weather, with a burning sun striking its hot rays into the earth, there is an absolute necessity of providing some defence to the roots of fruit trees especially, that they may be able to continue their growth and produce and mature their fruit, under these unfavorable circumstances. Nothing is more available to this end than mulching, which is to cover the ground around the trees with a good coating of decayed leaves and vegetable mould. The materials for this purpose, of the very best kind, can be found in the locks of fences, particularly when they run near or through the woods, when the leaves and weeds have been accumulating and decaying for many years. This material is beneficial to plants and trees in various ways. Being mostly decayed vegetable matter, it is a source of fertility, as it affords abundance of food to the roots. By being spread over the surface around the trees, it prevents the action of the sun in drying the roots, and it also prevents the evaporation of the moisture, and thus keeps the ground about the roots damp and cool, when that beyond the mulch is rendered hard and dry by the heat of summer. Young trees, when first set out, if protected at the roots with a good covering of mulch, will almost certainly live and flourish, even through the dryest summer, and their future fruitfulness be much increased by thus having an early and vigorous start given to them; while for the want of this they often struggle a long time for life, and even when they do not die, they are many years in attaining a vigorous fruitfulness.

Any kind of covering for the earth under trees will promote their growth—chips, trash, refuse limbs and branches, tan-bark, weeds, or hay—anything, in short, that will make shade, and in decaying add vegetable matter to the soil. I once noticed a peach tree, around which a pile of shingles had been thrown, and were suffered to remain several months, start into the most luxuriant growth, and it has continued ever since an uncommonly thrifty tree; while others near it, whose roots were not then covered, have made only an ordinary progress.

This shows that simply shading the roots during summer will promote the growth of a tree—much more if the covering material contains elements of mourishment for the plant. The mulch can be applied at any time, but it is best done early in the spring or fall.

Magnolia Grandiflora.

This noble tree, the pride and gloy of our southern land, is not half as much appreciated as it should be by our southern people. In foreign countries—in France, Germany, and

England—it is considered the grandest and most elegant of all ornamental trees, and is cultivated with the greatest care. No grounds that pretend to horticultural taste and beauty are considered complete without some specimens of these floral wonders; and where they will not grow in the open air, they are reared under shelter as rare exotics. And this tree is deserving of all this admiration and attention, whether we consider the symmetry and elegance of its form, the brilliant verdue of its broad foliage, or the exquisite odor of its large, snow-white flowers. Having all these rich and attractive qualities, making it a fit emblem of what our southern land has been, and is yet to be in her coming prosperity and glory, we yet seldom see this fine tree cultivated around our southern homes, while trees of far less beauty are freely planted out and prized. One reason for this is that the Magnolia is considered difficult to propagate, but with a little care and labor they may be raised in great abundance. The seed should be gathered as soon as they fall from the cones, which will be during the month of October, and they should be at once planted, in boxes of vegetable mould or woods' earth, about half an inch deep. Fifty or an hundred seed may be planted in a box two feet square and six or eight inches deep. The box should be kept in a cellar or green-house, or some sheltered place where the earth will not freeze during the winter. If it is kept out of doors, it should be covered over with leaves several inches deep, to keep out the frost. When the weather opens in the spring, place the box in some sheltered position, where it will get a few hours of the morning sun, and in a few weeks every seed will come up. They should remain in this box the first year. The next spring, transplant the young plants into separate boxes of any convenient size, filled with the same kind of woods' earth, and let them grow in these until they are twelve or eighteen inches high, then break away the box, without disturbing the roots, and set them in the ground where you wish them to grow permanently, and in a few years you will have trees that will more than repay you for your trouble.

Remember that seed kept for a few weeks out of the ground become rancid, and will not germinate; and if you want your trees to grow rapidly, plant them out in a large, deep hole, filled with light soil and well-rotted vegetable matter.

THE LESSON OF THE GARDEN.—A garden is a beautiful book, writ by the finger of God; every flower and every leaf is a letter. You have only to read them—and he is a dunce who cannot do that—and join them, and then go on reading, and you will find yourself carried away from the earth to the skies by the beautiful story you are going through. You do not know what beautiful thoughts—for they are nothing short—grow out of the ground and seem to talk to man. And then there are some flowers that always seem to me like over-dutiful children; tend them ever so little, they come up and flourish, and show, as I may say, their bright and happy faces toward you.—*Douglas Jerrold.*

CORRESPONDENCE.

[For the Reconstructed Farmer.]

MOUNATH, Aug. 31, 1869.

My Dear Sir:

Enclosed I send you an article from the *Farmers' Gazette* upon Lespedeza Striata, and as it is your department, I think it will be worth your while to republish it in the *Reconstructed Farmer.* [The article referred to can be found on page 170.]

To corroborate what the writer says in favor of this new plant, I will give you my experience, as far as it goes, as to its nature. I have here, at my summer place in Franklin county, an excellent lot of about an acre and a half, which I had broken up last spring, and on this roughly ploughed ground I had scattered a peck of the dirt containing the Lespedeza seed, which I bought of the Rev. Mr. Mott. This was all that was done. The ground is very poor, and is a grey soil, with a red clay subsoil. When I came up here the 23d of last June, I found the lot quite thickly set with weeds in the upper part—the lower part being so poor that very few weeds grew upon it. But on the surface of the whole lot the Lespedeza was growing sparsely, the plant standing erect where the weeds were thick, but laying flat upon the surface where the weeds were few. Now, for the last two months, we have had scarcely any rain in this region. From the 23d of June to the 29th of August there has not enough rain fallen to wet the ground two inches. A great many fruit trees have died; the very hardiest weeds shrivelled up with the drought; the wire grass and blue grass in my yard are as brown and dry as last year's hay; all blasted by the hot sun and the wind, which at times reminded one of an African sirocco. In the midst of this drought, when all other vegetation seemed perishing, the Lespedeza stood unhurt, its leaves looked as green, and its little pinkish-purple flowers bloomed as bright, as though they were not aware that anything was the matter. Doubtless it would have grown larger if there had been more rain, but it did not give the least evidence of dying. On the other hand, all the white clover had perished when the drought had only continued a month; and several lots of red clover about Louisburg that had been prepared with great care were as black and blasted as if they had been swept over by a flame of fire.

Under these circumstances, I consider that the Lespedeza has passed through an "ordeal of fire," and has thus proved its superiority over everything else as a plant for southern summer pasture. After such evidence of its superior vigor and tenacity of life, and the other proofs we have of its adaptation to our poor lands, and its excellent qualities for pasturage, every farmer who will not do something to aid in introducing it into our section of the State should be considered an "old fogy," who is not *awake* to the importance of using all means to advance the agricultural prosperity of the South.

I see that one of your subscribers is inquiring what kind of grass will stand the overflow of rivers and creeks. I think I have reason to assure him that blue grass will flourish under such circumstances, and be improved by the deposit left by the freshet. I judge from this fact: There is a small place in the churchyard at Tarboro that is a kind of basin, from which the water cannot run off after hard rains. Over this, which is planted in blue grass, I have seen the water stand, in the winter, more than a week at a time, and often frozen over for several days, and yet the grass is not killed, but when the water is abated, or dries off, it is as green as ever; and in the summer it is often covered with water for days, and the grass is thicker and higher here than in any other part of the yard.

I think these facts worth stating, and you can publish them in any form you please in connection with the article from the Rev. Mr. Mott.

With great respect, yours truly,

Jos. B. Cheshire.

Diseases in Hogs.

I saw in my last *Farmer* an inquiry in regard to thumps in hogs. I believe it to be the forerunner of cholera. I have had hogs to die with the thumps. Then I knew no remedy, but fortunately I have obtained a receipe that is, as far as I know from experience or heard, has proven about infallible, it being simple and easy to obtain; which is four pounds of madder, four pounds of sulphur, two pounds of saltpeter, and one pound of black antimony; pulverize the saltpeter and mix them well together; then give them one to two tablespoonsful at a dose, morning and evening, in slop, or if they are past eating, mix it in sweet milk and drench, which is very easily done by setting them up between ones knees, on their rumps. I have been in the practice of giving three or four doses, then quit for three or four meals, and then give it again. It is excellent to give to hogs not thriving, as it creates an appetite, and soon will put them in a thriving condition. Now, I hope none who read this will think it too simple to try, but persevere, and I think you will not be sorry for it.

Another, for colic or bots in horses—as it is hard to distinguish the diseases from each other. I had two horses, about one week ago, taken sick; we used several remedies to no purpose. I thought they would certainly die before night. Fortunately a neighbor came to see them. He said his father used to give two tablespoonfuls of spirits of turpentine is one half pint of lard; and we gave it, and cured both in a short time.—*Northwestern Farmer.*

Manuring Trees.—A safe guide is to watch the trees themselves. If they grow vigorously, with shoots of over two feet in length, with no care, then they need little attention; but if only a foot or less, the owner may settle his mind that he must apply both manure and cultivation to save his trees. If the trees grow annually from one to two feet or more, they are doing well.

G. W. Howe, Mt. Vision, N. Y., assures the New York Farmers' Club that he has not known the following prescription to fail of curing the bots, in a single case, for over thirty years: One pint of lard, a little above milkwarm, poured down a horse.

The Poultry Yard.

French System of Feeding Fowls.

The food of their poulty is very carefully regarded by the French breeders. For the first week after being hatched (and in winter for a much longer time), the chickens are fed on barley meal mixed with milk, stale bread soaked in water, and green food finely chopped. Very few instances can be found where poultry are fed on whole grain, as it is believed that whole grain would be too expensive, produce fewer eggs, too much fat, and cause more disease when fowls are fed *ad libitum*, so as to completely fill their crops, which renders digestion difficult. The food is mostly composed of about one-half bran, and the other half buckwheat, barley, or oatmeal, made into a stiff paste, with which the fowls are fed twice a day—viz., at sunrise and sunset. This diet is given indiscriminately to old and young. In some cases where fowls have not the run of meadows, they are provided with a certain amount of animal and green food. The waste of the butcher shops is boiled, the fat skimmed off, and when coagulated, thoroughly mixed with the meal food. Cabbages and other vegetables are supplied in some cases, being either fed raw or boiled and mixed with the other food. Buckwheat is considered preferable to all other grain as a stimulant to egg-laying, and in winter a certain amount is given whole.

Shearing Geese and Ducks.

A correspondent of the *Farmers' Advertiser* suggests, as a substitute for the barbarous mode of divesting geese, ducks, and other feathered fowls of their feathers for market, or to furnish materials for beds, pillows, etc., that they should be sheared as sheep are shorn. He says:

The usual mode of plucking geese—of course I refer to live geese—is laborious in the extreme, as the frequent shrieks of the tortured creatures testify. Shearing them would secure the finer and more choice part of the feathers, and I have no doubt but the geese or ducks would thrive better, and yield a coat oftener—and if not with better grace, at least with better feelings.

An Egg Curiosity.—The Batavia (Ill.) *News* has the following: We were shown the other day by Mr. E. C. Newton, one of the greatest poultry fanciers of this country, a hen's egg measuring seven and a half by nine inches in circumference, but of rather ill shape. Upon breaking the outside shell it was found to contain the natural yolk and another perfect egg, the shell of the inside egg being fully as hard as the outside shell, and about the size of an ordinary hen's egg. Whether this second egg contained another within it or not, we are unable to say.

Points of a Good Hen.—For general use, a hen should be a good layer, setter, and mother. She must be a good feeder, bright, clear-eyed, quick in her motions, but not scary; and with these points she will pay to keep. Besides, she should be large, well feathered, with small, short legs, with a small head, broad shoulders, and a deep body. The cock should be thicker in the leg, broader across the shoulders, fully a third heavier. He should have a gallant strut, be first out in the morning, first to go to roost, inclined to take on flesh easily, generous in picking out tit-bits for the hens, and not quarrelsome.

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With the highest regards, I am gratefully yours, &c.,

A. W. MILLS.

Koskoo, the Great Invigorator.—Read the following from the Rev. Joseph E. Martin, pastor of Wesley Chapel, Portsmouth, Va.:

"This is to certify that myself and wife have used Dr. Lawrence's Koskoo, and can *testify to its beneficial effects*. Previous to taking it we were in a condition of debilitation—had no appetite, and suffered from sudden and often violent attacks of headache and nervousness. Two bottles of Koskoo *has improved our general health*, and we regard it as *invaluable*, and most cheerfully recommend it to all who have need of an *invigorator*.

Yours, &c., JOSEPH E. MARTIN.

Read the following from Dr. Goddin, the *experienced* and *successful* "SPECIALIST," of Norfolk, Va:

No. 6 East Main street, Norfolk, Va., September 19, 1869.

Dr. Lawrence—Dear Sir: I have prescribed your "Koskoo" for Syphilis in its various forms, with the *most satisfactory* results. I have satisfied myself, *by experience*, that *it will* cure that disease in its Worst and most malignant stages, and eradicate every taint from the system. The Koskoo is certainly an Alterative of extraordinary power, and fully deserves the *great popularity* which it has so rapidly attained.

Yours truly, N. A. H. GODDIN, M. D.

KOSKOO CURES CHRONIC RHEUMATISM.

Norfolk, Virginia, September 7, 1869.

Dr. J. J. Lawrence—Dear Sir: My son *has received so much benefit from your wonderful Koskoo* that I cannot refrain from expressing my gratitude. I had tried almost everything without benefit. I believe, in all sincerity, that your Koskoo is an Infallible Remedy for the disease from which he has suffered, and, so far as I can learn, has *never failed*. If you only knew the immense amount of suffering that he has undergone, then you could *conceive the value of such a remedy as Koskoo*—that surely cures. The great amount of good it is *now doing* among us is *inestimable*.

With much gratitude, I am respectfully yours, &c., MRS. M. E. A. NELSON.

Dr. Lawrence—Dear Sir: Having been treated by several skilful physicians for Dyspepsia, Chronic Disease of Kidneys, General Debility, &c., without benefit, as a last resort I commenced the use of your Koskoo, and am pleased to say that under its use my health has been entirely restored.

I am, sir, with much respect, your obedient servant,

No. 5 Market street, Norfolk, Va., July 6, 1869. O. B. MEARS.

Pacific, Franklin County, N. C., September 11, 1869.

This is to certify that for a long time I suffered very much from *inaction* of the *liver* and *constipation* of the bowels, and tried several remedies, but received no benefit until I commenced taking Koskoo. I took the medicine about one month, and I was completely *cured*, and have remained well. I know of several *cures* made by Koskoo, and can cordially recommend it as a good medicine. JOHN H. BAKER.

KOSKOO for sale by all Druggists.

Dr. Lawrence's WOMAN'S FRIEND Cures Diseases Peculiar to Females.

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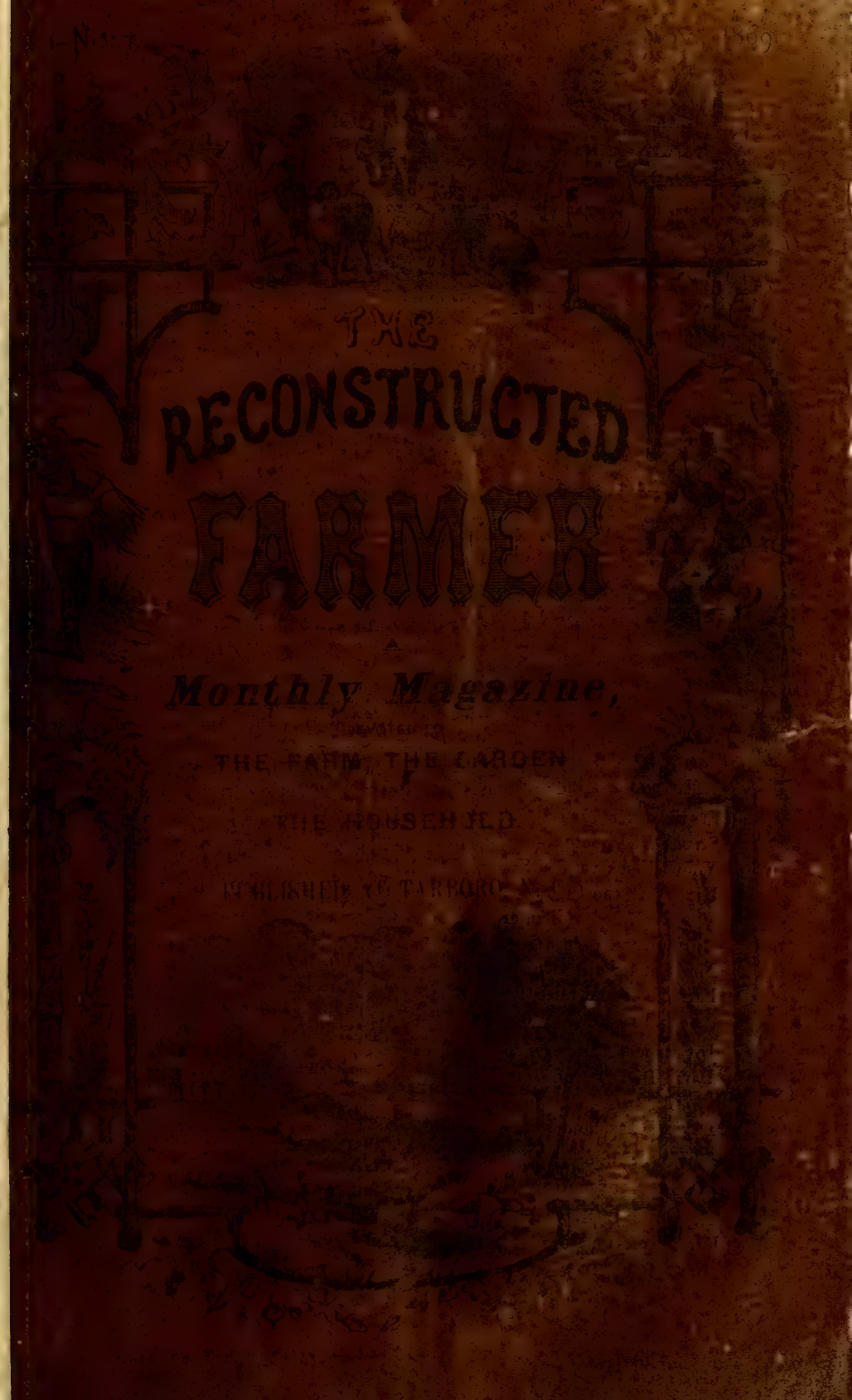
THE
RECONSTRUCTED
FARMER
A
Monthly Magazine,
THE FARM, THE GARDEN
AND
THE HOUSEHOLD.

DANCY & LAWRENCE,

AGENTS FOR THE SALE OF THE CELEBRATED

"Gullett Steel Brush Cotton Gin,"

FOR THE COUNTIES OF

Edgecombe, Halifax, Martin, Pitt, Wilson and Nash.

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Tarboro, N. C.

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN,
JOHN S. DANCY, - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

VOL. 1.] TARBORO', N. C., NOVEMBER, 1869. [No. 7.

Provision for Cattle on an English and on an American Farm.

The English farmer measures the improvement of his land by the number of cattle he can keep, while the American agriculturist finds his stock the surest means of impoverishment. With all the talk of bad ploughing and exhausting crops in connection with our worn down fields, we doubt if either one or the other has had a more baneful effect in this direction than the common American practice of increasing year by year stocks of cattle, sheep and hogs, which tread and bite and root out the life of the grass fields, and make impossible that accumulation of humus in the soil which is the first necessity of fertility. A large stock of cattle here is thought by observing men to be a pretty sure sign of unthrifty management. It is understood to mean that the farmer having dug all he can get out of his ground by poor cultivation, is turning in his half-starved herds to gather up the fragments, lest something be lost. The grain field from harvest to winter, and what should be the aftermath of a hay field, are given over to the stock of gleaners. What is in this way saved, is often harvested the following spring in a crop of murrain hides.

Yet the English farmer makes his cattle a double profit. The profit of a valuable branch of husbandry and the profit that he considers of more worth than that, the sure improvement of his land. The difference is in the management. The Englishman makes beef a specific object of his care, and makes specific provision for it. He provides rich old pasture ground of sod a century old for summer feeding, and for winter, turnips and oil-cake, and such hay as is gathered from well-cared-for hay fields. There is money profit made of the beef, and land profit made of the manure that the beeves leave. The American makes no such provision of pasture ground or winter feed, and makes neither beef nor manure. Instead of a well thickened turf that in the softest weather no hoof can cut through the crowns of young clover plants are submitted to the tread of cattle, and for winter rations, wherewiih to lay up flesh and fat there are straw and marsh grass and damaged corn fodder. A clover crop trodden to death, a grass field deprived of the covering of its fall growth, manure that has no strength to be washed out by the rains to which it is exposed, beef that has

no value but for rigid observers of the lenten fast, or, as we have said before, a spring crop of murrain hides, are the legitimate products of the American system of cattle keeping.

That all this is radically wrong needs no argument. It is ruinous to the farm to be heavily stocked when there is no special preparation made for the maintenance of stock, and on an American grain farm this is the case. Here everything is directed, and properly enough, to the end in view, the making of corn, wheat and other grains. The chief reliance for keeping up the land under exhausting treatment are the straw and corn stalks and the clover crop, with such grasses as to each one may seem to be necessary for his purpose. If a large stock of cattle be kept under the plea of consuming economically the waste of the grain crops, the profit will be illusive as far as the stock is concerned, because this provision is insufficient for profitable feeding, while it is ruin to the interests of the grain crop and to the land to have the clover and other grasses closely consuned.

It is very possible, indeed, to combine grain growing and stock feeding, and to make them a mutual support one to the other. It is here that our practice fails and needs decisive amendment. Let us have cattle indeed, and cattle enough on all our farms, not as gleaners of what we may call waste, but with ample provision made for their support in pasture and winter food. In this way we make first good cattle, and then good land with the manure, that will bring good crops of grain or anything else.

To provide pasturage for cattle there must be sod of some years' standing. It may be old pasture grounds, as we hear of in England of a hundred years' standing, or of fifty years and more, as we know to be now in the counties of Loudoun, Fauquier and others in Virginia. Or it may be a long rotation with grain and grass, that allows the grass to stand long enough to make several crops of hay, and then turns it over to feeding purposes for as many years as may seem desirable. The closest feeding can scarcely damage such pastures, and the tread of the hoof can do no harm. The grass is of such quality as feed the cattle up to the best condition of "grass fed" stock, and makes them worth providing for in winter. Root crops, corn and hay can all be profitably consumed by such animals, and the manure they leave is better than superphosphate and guano, and the best that can be applied to grain growing lands.

Except when cattle are so cared for and fed, not one should go upon a grain farm, but for the mere necessary purposes. The clover is the main reliance for preserving and improving wheat lands, and should on no account be grazed beyond the little treading that is useful in bringing down a full grown crop into contact with the surface. To have it close grazed after harvest and subservient to the common necessities of a stock of cattle, is the most wasteful and ruinous.

So of other grass. If we would have crops of hay to continue, and the land where it is grown to keep in heart, stock must be excluded from the fall growth. It needs all the return it can get after harvest to compensate the exhaustion of the crop taken off. Even if manure is at hand, with which to dress the ground, there is damage done in the treading and close biting that is not sufficiently considered. When a crop of hay has been taken off, and another is to be taken the next season, keep the cattle away, and let all the

after-growth lie as a top-dressing. In confirmation of this opinion, we give what is said of the practice of a successful hay grower in Western New York, as we find reported in the Utica *Weekly Herald:*

"It is a practice with Mr. H. to always let his meadows grow up in the fall—not a hoof is permitted to touch the dense, rich grass. This has been his practice for over a score of years. He was led to it by observing the grass of a small spot of land that was left for hay in a field of wheat, and was consequently left unpastured. This grew an immense crop, surpassing, by near half, the quantity of former grass. This convinced Mr. H. that there might be something in permitting meadows to to protect themselves. He has followed the practice with eminent success ever since. No such meadows are anywhere found, especially of timothy. Not a hoof is permitted to touch the land, and but little manure is added. The grass growing up, dense and thick in the fall, seems to be sufficient. Here is something worth the attention of dairymen, without any expense save a little manure now and then, dressing with plaster—omitted now and then—and no other fertilizer. Mr. H. uniformly grows, year after year, heavy crops of timothy; there is no failure. A neighbor of ours, taking a hint from Mr. H., intends to dispose of his stock and make hay his principal crop, leaving his meadows to grow up in the fall. cut in good time, secure well, press his hay and dispose of it. He believes from the long success of Mr. H. that he will keep his haying land in high condition and make more clear profit by this course."

Neatness is a great virtue. To allow weeds, sprouts or briers to grow up in fence corners is therefore a vice.

"Struck Phosphate."

We used to hear much about striking oil. He has "struck oil," was a passport to our best society. Major George T. Jackson, near Charleston, South Carolina, has "struck phosphate." What is meant by this is, that he lately purchased what was known as Hard Farm, on which he has discovered an extensive bed of the bony remains of land and marine monsters imbedded at the depth of about four feet. This was once the bottom of the sea, but it is now a pine and oak forest. This carries the geologist back for myriads of ages in his imagination. A corps of negroes have been at work for some months exhuming this bone dust as a rich marketable commodity. It is equal to the best of natural or artificial fertilizers. Vertebra too large for any animal now living, and teeth too ponderous for any sea devil that now swims, are thrown up. They pulverize on exposure to the air. A brownish white is the prevailing color of this deposit. About 400 tons of it are already mined, and purchasers are calling for it both at the North and in England. It promises to be a mine of wealth to the proprietor. *North Western Farmer.*

Food for Chickens.—A writer recommends for chickens, for the first week after hatching, hard boiled eggs, to be given (chopped fine) at least twice a day, wheat steeped in milk, and coarse Indian meal, bread crumbs, etc. A change of food is necessary twice a week, substituting cracked corn for wheat.

To Preserve Eggs—Dissolve gum shellac in alcohol, when the mixture may be applied with a common paint brush. When dry, pack in bran, points downward. Eggs so preserved will keep a very long time. When about to be used the varnish may be washed off.

Young Stock vs. Old Stock.

Not long ago in our monthly Notes and Suggestions we advised farmers not to keep old horses, for they are very unprofitable stock, and this suggestion was objected to by one of our correspondents, who stated that getting rid of an old horse which had been useful and valuable in his day, looked like an act of ingratitude and inhumanity, or something of that kind. We agree with our correspondent in his opinion that an old horse deserves to be well treated when he is no longer fit for the labors of the field, and on this account it is better that he should fall into the hands of some benevolent person who can afford to take care of him, than to remain on the farm to be in the way in place of being useful. A great many farmers have enough to do to support their families, together with horses and other stock that cannot be dispensed with. If a farmer can afford to keep an old, useless horse, on account of his former services, by all means let him do so, but as a general thing the practice of keeping horses until they have become old and depreciated in value should be avoided.

Old working oxen are bad enough, but there is a better chance of getting rid of them, without losing money, than old horses, for before they fail in the yoke they can be put into the stall and made up for the butcher. Nevertheless, there are many objections to keeping oxen until they are nearly past their labor: they consume as much food and do less work than animals in their prime, are not so easily fattened, and do not make as good beef as younger animals. It need scarcely be said that old milch cows are not so desirable for the dairy, for it is well known that they do not produce as good milk, or as much of it, as animals in their prime. Their calves are small and unthrifty, and the older they are, the more difficult it is to fatten them. Their beef is also inferior to that produced by younger stock. It is well known that the best quality of beef is produced by three or four years old barren heifers.

Light fleeces at shearing time, and dead lambs in spring, ought to be sufficient to warn the farmers against keeping old breeding ewes, yet some are to be found who disregard these silent admonitions, and go on in the old track until the animals become perfectly worn out. The wool of old sheep is much easier torn off by brush or briers than that of young ones, and from the decay of their teeth they are prevented from feeding to advantage—they cannot pick up sufficient food in the pasture, and require succulent provender to put them into good condition. Every sheep-breeder who has obtained any celebrity for producing good stock, makes it a point to keep no animals for breeding purposes but such as are of superior quality and in their prime.

The same results are obtained in the breeding of swine—old animals are unfit for breeding purposes. Successful breeders never keep sows or boars that are past their prime; they manage to get rid of such stock before they had suffered pecuniary losses by keeping them, and fill their places with animals of the best breeds and of the most suitable age. Those which are too young are not desirable for breeding, and those which are too old are entirely unfit for the purpose. Unsuitableness in age will neutralize many good qualities. Well managed hogs of the best breeds, from nine to twelve months, will weigh heavier than neglected ones of inferior breeds at twice that age. There is no occasion for keeping hogs until they are two years old; they may be sold with profit at one year or less.— *Western Rural.*

The History of the Plow.

The time when men first began to irritate the surface of the earth for the purpose of making it produce for them, is so remote as to be lost behind the veil of obscurity which hangs over the early history of the race. That it was at a very early period is clear. It is also clear that the ox and cow, perhaps other domestic animals, were made to serve as motive powers in the process of ploughing as far back as history goes. Man has ever been averse to bodily toil, and only submits to it when forced by necessity or induced by the prospect of gain. Hence, his inventive faculties were early employed in devising means by which his toil might be lightened and the results of labor increased. While engaged in cultivating the soil with a sharpened stick the thought came into his head that the forked limb of a tree might be made efficient; one prong was sharpened so as to run into the ground and the other fastened to a pair of oxen, that could do the work, leaving him with naught to do but hold it up and guide the cattle. He immediately acted upon this bright idea, and thus the first patent plow was put on trial. It proved a great success, and was, for a while, thought to be the *ne plus ultra* of improvement in this line. In course of time, however, some daring inventor began to question the perfection of this improvement, and finding a limb of a slightly different shape, he constructed an improved plow. The old fogies shook their heads and cried out humbug, but the progressive men took with it, and it ultimately superceded the old style. Ages rolled by before any material improvement was made on the forked stick plow. Finally, some great genius invented a plow composed of several pieces of wood, put together by mortices and pins; this again was improved from time to time, till, perhaps, it was brought as near perfection as a plow made wholly of wood could be. The Romans were probably the first to use iron in the construction of plows. The plow that Cincinnatus followed, and Virgil wrote poetry in praise of, had a metalic share, but aside from this was composed entirely of wood.

The Greeks have a mythology to the following effect: Ceres, the daughter of Saturn and Rhea, and mother of Proserpine, was the mother of invention and guardian of agriculture. One day, as Proserpine was gathering flowers, Pluto carried her away and made her queen of the lower regions. Ceres being disconsolate at the loss of her daughter, devoted herself to a search of the entire earth for her, in the meantime neglecting the interests of agriculture till the whole earth became a barren waste. Jupiter, and indeed all the gods, besought her in turn to return to Olympus, and resume her duties of guardianship over the science of agriculture, but she refused to think of anything but her lost daughter. Jupiter then visited Pluto and persuaded him to allow Proserpine to revisit the earth, and remain eight months out of the year and return and spend the other four with him. Ceres was content with this arrangement, and at once returned to Olympus. Befere going, however, she taught the art of agriculture to Triptolemus, of Eleusis, and gave him her own chariot, drawn by two dragons, commanding him to travel over the whole earth distributing corn for seed to all the inhabitants. It was Triptolemus who invented the plow, under the inspiration of Ceres. The Greeks so firmly believed this superstition that they held two annual feasts in honor of these two important events, the distribuution of corn

and the invention of the plow. Coming down to modern times, we find the plow, although a very useful and efficient implement, was still a very clumsy affair until a very recent date. Indeed, the present century has done more for the improvement of this indispensable implement of husbandry than the twenty centuries preceding it. So rapidly has this improvement gone forward, that we of middle life smile at the crude simplicity of the plows we followed when we were boys. Notwithstanding the perfection to which the plow has been brought, it is still a wedge cleaving the soil and compressing the sub-soil, and must be followed by the harrow and roller if the ground is to be put in good order for crops. We are still hoping that some modern yankee Triptolemus will invent a plow that will combine the functions of all three of these implements.

AGRICULTURAL REFORM.—Mr. G. W. Gift, of Memphis, Tenn., thus packs a great thought into a small space, and sends it forth to do its work:

"Reform must come. The working immense plantations by single individnals, possessing limited means, and dependent upon a demoralized class for laborers is being abandoned. Smaller areas, better cultivation and more work on the part of the white population is beginning. As a result, prosperity will and is already setting in. With prosperity will come increased inquiry for a better system of tillage and farm management. Then will come steel plows, barns and fine stock, manure heaps and plenty. Stick to your broad impoverished acres, and still if you like, but please allow the current of progress to go on."

Whitner's Cotton Planter.

Editors Southern Cultivator—I have been reading in your August No., several articles of "The Dow Law Cotton Planter." I have never seen this machine at work, but from all accounts, it is probably good.—But I wish to give in my evidence in regard to the planter patented by B. F. Whitner, of Meltonville, Fla. You may perhaps have, at some time, published some notice of the machine, but if so, I have never seen it. I used this machine this spring in planting cotton seed just as it came from the gin without any preparation; planted a fraction less than a half bushel of seed to the acre, opening, planting and covering all at once, with one mule and one hand to the planter. I averaged eight acres per day with the machine, with raw hands who had never touched any such machine before; and part of the land was very rough, which, of course, caused delay. The cotton came up in narrow streaks the whole length of the row, and a beautiful stand. Some of the land was planted in the old way, viz.: a furrow opened, seed sown by hand, and covered with a harrow. There was no comparison between the two lots. That planted with the planter was much the best, although nearly three bushels to the acre was sown by hand.

One gentleman, on a river bottom plantation, just after a freshet, planted his cotton, using one of these planters on part of his land and sowing by hand on the other. Just after planting the earth was packed by a beating rain and a hard crust formed over the seed by the sun. He tells us that, where he used the planter, he had a good stand, and where he did not there was no stand at all. The seed being planted in a narrow streak, helped each other,

and cracked the crust the whole length of the rows.

The beauty and usefulness of this particular machine is, that it is a universal seed planter. It sows turnip seed as well as it does cotton seed, and will drop corn or peas at any distance apart you may desire.

For putting in fertilizers, in any quantity desired, I don't think it can be excelled. All that is necessary is to mix the fertilizers with killed cotton seed, (we kill ours by steaming at the time) and then gauge the hoppers to turn out the proper quantity to any fraction of an acre, measured in rnnning yards, which will, of course, vary with the width of the rows.

I only write to bring the machine before the eyes of the planting community, and to hear what others, who have tried them, have to say. I believe that they cannot be beaten, but if any others are better, would be glad to know it. The planters cost me, delivered, $40 each, but the maker is desirous to be able to reduce the price as much as possible, which can only be done by having demand enough to justify making a large number. I know of no better for all purposes, but if there is a better, would like to know it. I want farmers to get the best machines, and that is the only interest I have in it. The two machines that I have used this year have more than paid for themselves, this first year, in distributing manure regularly, and in planting cotton. They are well made, and will last for years.

THOS. MAXWELL.

Tuscaloosa, Ala., August, 1869.

Californians say by the help of refrigerator cars, running over the Pacific railroad, they can furnish all kinds of fruit, not of a perishable nature, in any Atlantic city, at half the price they are now sold at.

Tim Bunker on Ashes.

Mr. Editor—You 've been printing for farmers some fifteen or twenty years, and I s'pose you think you 've had your say on all farm topics, and the pond is getting dry. At any rate we 've got folks up here whose ponds have been dry this twenty year. Can't get a new idea into their heads any more than you can drive a wooden wedge into a boulder. They farm it just as their grandfathers did, and would use wooden plows to-day if they hadn't been driven out of the market by cast iron, and all the mechanics had not forgotten to make them. Uncle Jotham Sparrowgrass, however, does get new ideas, but won't own it. He still swears by the Island, and what was n't known in the vicinity of Peconic Bay thirty years ago isn't worth knowing, and can't be of any use to the farming community. The Early Rose is the same potato they undertook to start on the Island whon he was a boy, and Southold was too smart to be humbugged by it. The King of the Earlies is the old Rohan in disguise, and he would not give fifty cents for a cart-load on 'em. When he came upon Deacon Smith's big pile of peat ashes he walked around it, and stuck his cane into it as if it had been an old acquaintance.

"Wonder if the Deacon thinks he is going to make anything grow wlth this stuff. Wood ashes now would amount to suthin'. They tried 'em on the Island, and the way potatoes and grass started was a caution. But this burnt peat and turf aint worth the cartin'. A mighty sight of trouble he is takin' to skin his swamps, and he won't get a rush for it."

"Smith loves work," suggested Jake Frink ; "kind o' keeps him out o' mischief."

"He'll make money out on't, see if

he don't," said Tucker. "Put that creetur' on a bare rock and he'd git rich sellin' the scrapins."

"If he could get anybody to buy 'em," added Jones.

"Never mind that," said Jake Frink. "He'd scent 'em with fish ile, and make folks believe it was genuine scrap instead of scrapins."

"The proof of the pudding is in the eating," said the Deacon, modestly. "Just walk over to my meadow and see what a hundred bushels of these ashes have done upon an acre of grass."

So we had to walk over and see where the soil had been eating that sort of pudding. I was astonished. Uncle Jotham was as quiet as a scared chicken in the grass. Could'nt get a word out of him for some time. The Deacon is a master hand to bring folks right up square agin solid facts. There was the grass waist high, and the heads of timothy waving almost like a wheat field. You could see the line where the ashes stopped a long way off. Uncle Jotham marched up and down the line and poked his caue into the grass to make sure there was no barn-yard manure or sea-weed about the roots.

"Must be a mistake about it somewhere," said Uncle Jotham. "Never knew peat ashes to do anything."

"What will you do with the facts?" inquired the Deacon, coolly.

"Confound your facts," said Uncle Jotham, swinging his cane. "I can bring ten facts to your one, that peat ashes won't pay for burning."

"Well," said the Deacon, "this fact I know about. The peat ashes suit my land, and I shall keep on burning until the whole farm gets a good dressing. Three tons of herds' grass to the acre shows that the land likes it."

I gness the Deacon will make a small fortune out of that peat bog yet. You see, when he got a patch cleared of the brush, he had to pare the bog to get it ready for the cranberry plants. This was necessary work, whether he made any use of the parings or not. He reckons it costs about $75 an acre to pare a foot deep. If there are fresh stumps it will cost more. A cord of these sods will make about four bushels of ashes if you burn them carefully. That is to say, you must not let the fire burn too freely, if you want to make the most ashes. You can regulate the fire by putting on more peat and sods, and by checking the ventilation. He calculates that he can get from an acre about 1,300 bushels of ashes, worth 20 cents a bushel for farming purposes. As the Deacon is forehanded, and does not need to sell the ashes to raise money, he markets them at home. If it pays other farmers to buy ashes at 20 cents a bushel, he thinks it pays him to make them out of his own materials, and use them upon his meadows. They may not be quite equal to ashes made from hard wood, but there cannot be a very great difference. There are many stumps and roots in the parings not yet decayed. These, of course, make wood ashes. Nearly all the rest is decayed wood and leaves, and the remains of such plants as flourish in swamps. Something, of course, is lost in the burning of so much organic matter. It would be better if we could pass it all through the compost heap or barn-yard, on its way to the meadow, but it would take a great deal of labor to handle all this bulky material. Burning makes short work of it, reduces its bulk, and puts it in a condition to benefit the fields immediately. It is quite possible that the Deacon gains in time and in the saving of labor, all that he loses in material. At any rate he is

doing pretty well in getting rid of his elephant. You see, 1300 bushels of ashes at 20 cents a bushel, amounts to $200 an acre. Allowing that it costs as much to cart and burn as it does to skin the bog, say $150 per acre for both, he will have $110 left for profit, or to go toward the expense of sanding his bog for cranberries.

These ashes must be very valuable for most farm crops, even where the burnings are not purely vegetable matter. Clay and upland sod, when burned and pulverized, produces astonishing results upon grass and other crops. An English gardener came along here a few years ago, and tried some burned clay that he took out of a drain, as a top-dressing. It put a new face upon all the crops in that garden that season, and the effects are still visible. I think the Deacon's experiments in making peat ashes are worth a good many millions to the country. Farmers who own swamps have in them the means of enriching their farms to almost any extent. It will certainly be safe to pare a few square rods, burn the turf, spread the ashes upon grass land, and mark the results. If we can get a thick, heavy sod, we need not be troubled about the other crops in the rotation.

Yours, to command,

TIMOTHY BUNKER, ESQ.

Hookertown, Conn., Sept. 15, 1869.

Farmers Should Raise Their Own Meat and Bread.

Editors Southern Cultivator—I suppose all men are liable to commit errors and be mistaken; and if Mr. J. W. Crawford has not made one in his letter in the August No. of the *Cultivator*, I am very badly fooled, to say the least of it. If the planters in the cotton region were to take his advice, or pattern after him, it would, in my humble judgment, prove one of the most ruinous things possible to the South or the cotton region. He says the loss of Mr. Dickson's hogs and cattle will prove a blessing. Now, I would like Mr. C. to prove this satisfactorily. He further says he considers hogs and cattle a great nuisance in a cotton region. Does he know how large a scope the cotton region is, and how many mouths there are to eat meat in this region? Methinks the answer would be, he does not. He says it won't pay with cotton at 20 cents. If his advice was taken, what does he think his bacon would cost him. I can come nearer the price than he can. Not less than 40 to 50 cents—and I'll go my bottom dollar on it. I contend that all housekeepers, and especially farmers and country people, should raise their own meat and bread, and their own everything else that is possible and practicable, at home. I have been planting cotton 20 years—made as much cotton to the hand as any of my neighbors, and raised 100 lbs. of meat to sell, where I ever bought one. Even since the war, I have sold from 300 to 400 dollars' worth of bacon a year to my neighbors—some of whom were like Mr. C., but are now convinced, and many are raising their own meat; and their cotton, too, has averaged them over 20 cents for the last three years. But if our cotton region depends upon raising cotton to buy meat, bankruptcy will follow sooner or later. I could say a great deal more, but will not weary you.

I agree with Mr. Dickson on the immigration question. He is certainly right in my opinion. We have plenty of labor, and that better than any we can get. We all plant too much of our land—we should let from one-third to one-fourth rest every year—have plenty of clover lots, grass lots, and fat hogs and

cattle; improve our lands. Our children and grandchildren will bless us for it; and if we wear it all out, what is to become of them. At some future date, they will be transported as laborers to some unknown country. Bring in immigrants, to try to get rid of the negroes, and my word for it, in less than ten years, we would pay three times as much to get rid of them, if we were able; but by the time we have them here a few years, we will all be too poor to fly up to roost. If we could only realize the negro free, and let Mr. Yankee stay North, and make our own laws and enforce them, to make the white and black stand square to their contracts, and punish every man that did not, (when children do wrong they should be corrected, and when men do wrong they should be punished well,) we should do finely.

Now let every man put his shoulder to the wheel, and first push himself, and help to make the negro race as honest and industrious as possible—never deceive them nor deceive ourselves—and my word for it, we will be an independent people, and not until then. I have been working from 30 to 40 hands ever since the war, and I don't think I have had half dozen hogs stolen.

Our crops in North Mississippi are tolerably good. We can't make a full crop, but may make a fair one.

THOS. B. SMITH.

The *Gardener's Monthly* says that the Cherry and Versailles currants are not all the same in any respect but the size of the berry, which in both instances is of the largest size. The Versailles has a bunch nearly double the length of the Cherry; the berries are also sweeter, while the Cherry is very sour. Indeed the Versailles is little inferior to the Old Red Dutch in good properties, while it is nearly one-third larger.

Diversified Agriculture.

It was a singular idea for a warm climate that the human family only needed clothing—that cotton must be the *sumnum bonum*. Whether cotton, wheat, or any other crop is made a specialty for whole States, failure must result. If proper effort is put forth the market is glutted, and the price low, while the cost of everything else will be enhanced many fold by the labor and cupidity of our army of producers and carriers. The old cotton crops, with very few exceptions, never commanded $200,000,000; the present crop, half as large as the largest ever made, is worth more than $150,000,000 in gold to-day, while corn is becoming plenty, wheat increasing, and the people more self-reliant and nearer self-supporting than ever before. No cotton crop ever brought so much money as the wheat crop of 1867, yet wheat is but one of the many necessaries of life, the aggregate of which would swell into an equivalent for many crops of cotton. I have written elsewhere: "While cotton may ever be a prominent crop, it should only be cultivated as one of several products for exportation, and an ample sufficiency of everything consumed upon the farm should be grown at home. The idea that Southern horses should be obtained in Kentucky, flour from Missouri, and part of the corn supply from Illinois, has been a curse to the Cotton States. Specious and false was the theory of reciprocity of material interests; it never can be profitable to carry bulky agricultural products a thousand miles, to be used on soils as rich and cheap as any in the world, at an expense for transportation far exceeding the cost of production at the place of consumption. The variety of which this region is capable is truly wonderful; embracing all the cereals, grasses, vegeta-

bles, and fruits of the temperate zone, with many of the productions of the tropics. A belt extending from twenty-five degrees to thirty-nine degrees north latitude, including a range of elevations amounting to 6,000 feet, and geological formations from the primitive granite to alluvium now in the process of deposition, cannot become a wealthy region, rich by persistence in the culture of a single product."

The sugar interest in the future, will be one of immense magnitude. Instances are reported, the past season, of five hundred dollars gross returns per acre of cane. Instead of 200,000 hogsheads of sugar, the former product, our wants in the immediate future requre the manufacture of 700,000 hogsheads; and there is no good reason why a full supply and a surplus for exportation may not be produced upon the Mexican Gulf coast. At the present rate of interest this result could be attained in less than five years. The crop of '67 was less than fifty thousand hogsheads; that of '68 was considerably above one hundred. Our cheap lands, superior soils and fine climate, give advantages which Europe never enjoyed in building up her really substantial beet sugar interest.

Rice as a production has never been developed as it must be in the future. It is of superior quality, and is sent to Asia and the islands of the Pacific for seed. I have before me the journal of the Agricultural Society of New South Wales, with notice of the recent introduction of Carolina rice. It is eminently suited to the lowlands of the coast and adjacent islands, and its culture can be largely extended with profit.

The Ramie, (*Boehmeria tenacissima,*) a fibre of remarkable strength and beauty, is also cultivated, and hopes are entertained of successful practical results in its culture. Our paper makers may yet obtain from this region a surfeit of cheap material. The Esparto grass, (*Stipa tenacissima,*) of the mountains of Southern Spain, which is extensively exported for paper making in England, will be introduced among the hill lands of the South by the Department of Agriculture. The young reeds of the canebrakes are now largely used for paper making, and a great variety of other fibrous material will be utilized for a similar purpose.

The production of oils from cotton seed, the castor bean, (*Palma Christi,*) and other oleaginous seeds which grow to perfection in the Southern climate, will yield a mine of wealth to those engaged in growing the plants and in expressing the oils, while the residum, or cake, will supply the most nutritious cattle foods and fertilizers. Initiatory enterprises in this direction have proved their feasibility and glimpses of the wealth which they will ultimately create.

The culture of peaches, grapes, olives, figs, oranges, lemons, bananas and a great variety of other fruits of the semi-tropical and temperate climates, will constitute a prominent feature in the industrial system of the future. Splendid results are already attained, sufficient to give augury of the coming greatness of Southern fruit growing.

J. R. Dodge.

—*Rural Carolinian.*

A Swedish cotton factor has purchased 12,500 acres of land in Missouri, where he will establish a colony which will plant cotton and manufacture it.

The moon was to have caused all sorts of troubles on October 7, according to the philosophers, but she behaved herself.

David Dickson and Improved Farming.

During the first week in August last, with the interests of *The Rural Carolinian* and its fifty thousand prospective readers in view, we made a brief visit to Mr. Dickson's plantation, situated on the Little Ogoochee river, in Hancock county.

From the beautiful little town of Sparta, a drive of nine or ten miles through a pleasant rolling country, the wooded portions of which presented a mixed growth of pine, oak and hickory, brought us to Mr. Dickson's homestead. The soil of the country through which we passed, like the forest growth, is of a mixed character, red clay and gray sand alternating. We passed several neat, well cultivated plantations, which seemed to indicate that Mr. Dickson's precept and example had not been without their influence. Cotton was here, as we had observed it elsewhere during our journey, the principal crop. Those who think our ancient king has been deposed are greatly in error. He yet lives and reigns in spite of war, emancipation and "reconstruction."

As we approach Mr. Dickson's plantation the soil loses its mixed character, the land becoming what is called gray, and the forest growth being mainly long-leaved pine.

On entering the plantation we observed that the gates and fences were all in a serviceable condition, and that there was that undefinable air of thrift about the place too generally lacking among us. Between the main road and the house we passed a large corn field—the largest and the best we had seen during our journey. It was good corn, but the condition of the field slightly disappointed us. It was not free from grass, and had not been worked in the most skillful manner. We afterwards learned that it was rented to freedmen whom Mr. Dickson had not been able to induce to do the work just right; so when we referred to the field as the best we had seen, he said that it ought to have been a great deal better, and that he would not own it as a specimen of his farming at all.

We met Mr. Dickson at the house. A very modest cottage, such as you may see on many a small farm in Georgia or South Carolina, with nothing remarkable or pretentious about it in any way. Everything for use and comfort, and nothing for show is evidently the rule. The farm buildings and negro quarters are more likely to attract attention than the dwelling, as they are decidedly better than usually seen.

A MODEL COTTON-FIELD.

The first thing that attracted our special attention as we approached the cotton-field was its smoothness of surface—the entire absence of those ridges and hills, made by the plow and the hoe, which mark the rows in our fields generally. The next noticed peculiarity was its cleanness. No fringe of crab grass and no straggling weeds were to be seen. Mr. Dickson does not attempt to make a crop of cotton and a crop of grass on his land at the same time. The cotton was a sight worth travelling all the way from Charleston to see. We had seen nothing like it during our journey. Some small patches on town lots in Sparta and elsewhere could show plants quite as tall perhaps, but the pre-eminence of Mr. Dickson's cotton lies in its stocky growth, its numerous heavy branches—and, above all, in its prolific fruitage—the bolls and squares clustering thickly in double rows upon the branches. "I do not cultivate cotton for the weed," Mr. Dickson remarked, "but for the bolls."

There had been a severe drouth,

and much of the cotton we had seen elsewhere had shed leaves, squares and bolls to a greater or less extent, but here we observed no loss of this kind, the plants being fresh, healthy and vigorous from bottom to top. In brief, here was cotton that promised a yield of two bales to the acre; and it was not on rich bottom land, but on what people are pleased to call a "pine barren"—not fresh pine barren either, but land that has not been under cultivation for *seventy years*, and was so poor and worn out when Mr. Dickson bought it, we were told, that no one else would have it at any price. With these facts in view, one begins to appreciate the results of his improved system of farming.

The field of which we have been speakiug will, under Mr. Dickson's cultivation, produce forty bushels of corn to the acre, and his corn crop never fails! No drouth burns it up. "I can tell in the spring," Mr. Dickson said, "where the *dry streak* will be in summer. It always follows the bad farming." The "dry streak" never falls on *his* corn-field. We shall see why when we come to examine his mode of planting and cultivating corn.

We might speak at much greater length of what we saw and heard during our brief visit to Mr. Dickson's plantation, but what our readers are most interested in learning is, how the results we have described are attained. Mr. Dickson is successful. He makes heavy crops on poor land. He has acquired wealth by planting. Every planter and farmer, it is presumed, would like to be and do the same, and each is anxious to know how the thing is done.

MR. DICKSON'S SYSTEM.

We can tell our readers, in brief, how Mr. Dickson farms, but we cannot ensure every man who may essay to follow his example the same success. Few possess his intellectual capacity, his sound judgment, or his executive ability; but all may improve and approach, if they cannot reach, Mr. Dickson's high position among the great agriculturists of the present day.

The principal points in Mr. Dickson's system, as they struck us in our examination of his operations, are:

1. A deep and thorough preparation of the soil;
2. The liberal use of manures;
3. Level and shallow cultivation;
4. Rotation of crops;
5. Economy of labor.

Do you say that there is nothing new in all this? Perhaps not. In theory the principles which underlie the system have, in the main, been long since accepted by the best informed agriculturists of Europe and America; but our practice, with few exceptions, has been diametrically opposed to them, as will more strikingly appear when we look at the matter somewhat in detail.

First, then, in regard to the preparation of the soil. Mr. Dickson's maxim is, "plow as deep as you can," or say from eight to fifteen inches and subsoil every fourth year, accumulating all the vegetable matter you can on the surface to be turned in. Land thus prepared admits the air, holds moisture and allows the roots of plants to penetrate deeply, and thus ensure themselves against drouth. Do our farmers generally prepare their soil in this way, or make any approximation to it?

In the second place, everybody knows that manure is a very good thing for growing crops, but we go on, year after year, planting without manure, or very little of it. Mr. Dickson, knowing that manure, judiciously applied, will pay, uses it freely. But what kind of manure, and how

much? In the first place he returns everything to the land (after being eaten or used) which he has taken from it, except the lint of the cotton, and, in addition, gathers leaves, pine straw, and the scrapings of swamps, and digs muck to spread in his stock yards and to scatter broadcast on his fields. Then he makes up the required amount of the fertilizing elements by the application of a concentrated compound composed of Peruvian guano, dissolved bones, common salt, and land plaster in equal proportions by weight, mixing the ingredients himself. Of this compound he has used this season, if we mistake not, about 800 pounds to the acre (except on rented land) at a cost, probably, of not far from $25 per acre. Is such manuring an old thing—in practice, we mean—among our planters and farmers?

HOW HE PLANTS COTTON AND CORN.

But it is in the planting and working of his crops that Mr. Dickson's practice differs most strikingly from that of most planters. Let us see how he does it:

1. *Cotton.*—He makes the rows four feet apart, opening with two furrows a trench of about eight inches deep. Into this deep furrow the manure is scattered and covered with a scooter plow, going about as deep as the other two furrows, and followed, on each side of the scooter furrow, by a turn-plow running seven inches deep. He opens the seed furrow with a bull-tongue plow, drops the seed thickly and covers lightly with a board. The ploughing is done with the famous Dickson sweep, running shallow—the last ploughing is not more than half an inch deep; and the ploughing and hueing is repeated as often as is necessary to keep the ground perfectly clean, *but the soil is not heaped up about the cotton nor the roots cut by either plow or hoe.* When the crop is "laid by" the ground is nearly level and smooth.

2. *Corn.*—The land being broken up at least eight or nine inches deep and subsoiled if practicable, he lays off furrows, with a long shovel plow, *seven feet apart;* then, commencing at the opposite end, he opens out the furrow with a *longer* shovel plow, leaving the furrow open *seven or eight inches deep.* Whatever manure he uses is deposited in this furrow, three feet apart, and the corn dropped three or four inches from the manure. He covers it with a light harrow one and a half inches deep. Observe that we have here deep *planting,* but not deep *covering.*

He gives his corn three thorough workings, keeping the field clean and free from grass, and planting a row of peas between each two rows of corn. The details of his cultivation we intend to give at a future time. It is sufficient to say here that the same principle of shallow ploughing is applied to corn as to cotton. There is no hilling up, but a smooth, level surface.

Does not the reader now see why Mr. Dickson's corn never suffers seriously from any ordinary drouth? Having for several years planted corn on a similar plan, though not quite so deep, we can add our own testimony, were any further evidence needed, in favor of deep planting and shallow cultivation.

Mr. Dickson's rotation in cropping his land is:

First year—Cotton;
Second year—Corn;
Third year—Small grain;
Fourth year—The land lies fallow.

The resting of the land allows it to accummulate humus or vegetable matter, which may be increased by planting peas, (or clover, where it will succeed,) to be turned in at the proper time.

It would not seem very difficult to follow Mr. Dickson thus far, so as to keep within sight of him at least, but when we come to what we have called Economy and Labor, there are brought into play certain natural gifts with which few are so largely endowed as he.

"The farmer must make every stroke tell," Mr. Dickson says, and he does make every stroke tell. Not satisfied with increasing the productive capacity of the soil, he develops also, and still more wonderfully, the productive capacity of the laborer. This he accomplishes by using improved implements; by time and labor-saving modes of working, and more than all, we think, by his peculiar talent for training and managing the laborer himself. This peculiar trait is most strikingly illustrated by the fact that under the old system, when labor was perfectly under control, he was accustomed to cultivate thirty-three acres to the hand, while other planters, as a rule, cultivated only fifteen; and to accomplish this he employed no overseer or driver.

Such is Mr. Dickson's farming. A general adoption of his methods, with only an approximation to his executive efficiency, would at once more than double the products of the South, and at the same time increase, year by year, instead of diminishing the fertility of the soil.—*Rural Carolinian.*

THE CASTOR BEAN AND COTTON PLANT.—A Beaumont correspondent of a Texas paper says one stalk of the castor bean came up last year among the cotton of Dr. W. H. Baldwin, of that neighborhood, and that although the worms destroyed nearly his whole crop, there was no sign of the worm within a hundred yards of the castor bean plant. Similar statements have been made by other planters in Texas.

David Dickson on Immigration.

SPARTA, GA., June 10, 1869.

Editors Southern Cultivator—I wish to draw the attention of the cotton planters of the South to the subject of immigration. It is one of great interest, and if successful, I think will prove destructive to the cotton interest. I do not wish my views to prevail unless they are right. I wish both sides to be heard, and hope those who can wield the pen, and who agree with me, will be heard; the other side has been heard already, and we have been taxed to promote this cause. The State of Georgia is moving for our destruction.

The negro we have with us, and we cannot get rid of him if we would. They will not die out, as most of our Northern friends and many of our people think. The next census will show a large increase. The only way to make it tolerable for them to live amongst us is to give them employment. With full employment they will steal less, be more law-abiding, and a less nuisance in every way. Do we want more labor, and for what? The agricultural interests at the South is chiefly valuable for its production of cotton, tobacco and rice. Can we make more money by doubling the quantity of labor than we can get out of what we now have? Do numbers increase the quantity of labor *pro rata*, or will the dividends be greater for all concerned? Can the first million of people in Georgia, having the first choice of lands to cultivate and the balance for pasture, make more or less than the second million, having the poorest half to cultivate, and no waste land for stock to graze on? Is the second million likely to be more skillful, law-abiding and enterprising, &c.? I think history teaches us that a population, with a plenty of room

and land, are more cheaply governed than a dense population—can live better, and can have more labor to spare for improvements. What country has built the same amount of railroads and factories as the United States? The United States, having plenty of lands to cultivate, by selecting the best, can, with one-half of its laborers, make a plenty of all the products of the soil, whilst the other half can build railroads and machinery of all kinds, and work them. The cotton States, with its present labor, can build more railroads, erect more factories, develope more mines, carry education and refinement to a higher point than if the population was increased four-fold. With cotton at twenty-five cents per pound, you have money to do whatever you wish collectively. In 1848 and '49, with 900,000 to 1,000,000 bales of cotton in Liverpool, cotton sold in Augusta at from $4\frac{1}{2}$ to $5\frac{1}{2}$ cents. With 350,000 to 400,000 bales at present in Liverpool, cotton is selling in Augusta from 25 to 29 cents per pound. Why do you wish to make the change? Our Northern friends say, if we do not produce cotton cheaper, we will lose the trade. I am willing to lose it, if it can only be held by making cheap cotton. If they would take a little more interest in preventing the loss of our liberty, instead of the loss of the cotton trade, it would inure to the benefit of both sections. Give us our liberties and constitutional rights, with our best men to represent us in all our departments, and we can make as much cotton as the world wants, at fair prices, if it be ten millions of bales, without an outside man or dollar. Good government would do more to develope this country than all the men and money in the world.

Cotton planters, it is not to your interest to sell your land at a mere nominal price. How can you invest your money to any better advantage. Land must advance in price. In thirty years, without a single immigrant, Georgia will have a population of two millions of people—the sons and daughters of the present population. Be patient—wait for the natural increase, and what may voluntarily come. Do not spend your money to hasten an over-populated country. It will come soon enough, and when it does come you will have no outlet. Some are willing to cut their lands up into small lots, and give every alternate lot to immigrants, thinking it will more than double the price of the balance. What do you care what your lands are worth, if you have none to sell; besides, it would reduce the price of cotton more than one-half, and the land you have left would not pay per acre, one-half of the dividends they do now—reducing your profits three-fourths. You have a plenty of native poor people to sell land to, if you wish to part with any.

Do those who have no land wish competitors in labor, and in the land market—reducing your wages one-half or more? Do you wish a great increase of money capital, reducing the rate of interest to the standard of Europe, causing all property to rise in proportion to the fall of interest? Your wages are fixed by the surplus of cotton you have to export and the price it will bring in Liverpool. Your prosperity depends on the scarcity of labor and a high rate of interest. You have nothing but your honor—you cannot borrow money, even if it gets down to two per cent. The value of your labor being fixed by the value of cotton in Liverpool, where interest is low, you can, by residing where it is high, acquire proportionally, much more land in a given time.

To those who have land to sell, or

more than can be worked, let me say the very scarcity of labor will make one-half of your lands bring in annually more money than if all was planted—the other half is worth five per cent. to grow broom sedge for grazing, and will advance more than five per cent. annually. For the safety of the manufacturing interest, especially in cotton, it is not prudent to push it too fast—not faster than markets can be found for the products manufactured. Just as sure as the winds return the water, to be condensed and fall again above the shoals, the people here will possess the money and energy and skill to put the water to work; and to effect this most speedily we want a scarcity of cotton, and correspondingly good prices.

With cotton at twenty to twenty-five cents per pound, we can in Georgia appropriate ten dollars towards increasing our manufacturing interest with more ease than one dollar, with double the labor, and cotton eight to twelve cents. Where are the laborers best fed and clothed? Where labor is scarce. Where does land pay the best profits? Where labor is scarce; and the reason is, the products of the farm bring the best prices under these circumstances.

I am equally opposed to begging for money to be brought to the South to be invested. If capitalists come of their own accord, let them come; but it is not to our interest that they should. You now own the property of Georgia—if you sell one-half of it, you will own but the other half. It is very difficult to transfer real property from one country to another. The most you would get would be the means to live and dress fine for a few years.

What we want is a system of saving and property investing each year. We could and ought to save annually fifteen millions of dollars, to be invested in machinery. That would pay future dividends, to be re-invested. I am for more labor too, but I want such as we may never regret acquiring. Accummulate all sorts of labor-saving machines; improve your land to a capacity double its present rates; improve your systems fully double of what they now are. Learn to do fully fifty per cent. more work, with the same labor that is now done, and with more ease; learn to apply your labor to greater advantage than is now done—do all this, and more too, which can be done, and you will find your products ample, without any increase of population. Leave the subject of immigration to time and the free will of those who wish to come among us and be of us.

We owe our prosperity at this time entirely to the scarcity of labor—many negroes having refused to work; others being employed in repairing torn-up railroads and building new roads. If all the negroes had gone to work on the farms, and done full work, it would have taken twenty years to reach our present situation. The scarcity of labor is the only blessing we now enjoy as a result of the war.

The scarcity of labor in the South gives us the proceeds of the very labor some people wish to transfer here. The profits of one hand in the cotton field give us the labor of two in Europe. Transfer him here and he will compete with the labor we now have, or he will labor with those we now have to lessen their profits and bring about a state of things which will get up strikes. You must recollect, a strike in the cotton or harvest is not like one in a cotton mill or on a railroad. If the mills stops what has been done is not lost—if the hands refuse to move any dirt, what has been, re-

mains. Not so with wheat and cotton—all is lost, unless you continue to advance. The guano must be pumped up into the cotton bolls, and they must be gathered by uninterrupted labor.

One more point I will mention, and then leave the subject to be discussed fully, I hope, by abler pens. The press of the South has labored earnestly to get the cotton planter to make all his supplies at home, urging it as being the cheapest policy. Now every cotton planter knows that nothing pays as well as cotton, and all the presses in the world cannot change his opinion. But if the press will strike at the root of the evil they may do incalculable good. I will state what it is: I have always practiced it; both the true interest of the cotton planter and patriotism should make all adopt it. Apply one-half of all labor and land to the making of full supplies of all kinds that are needed on the plantation, and enough to spare for those engaged in other pursuits. Do this, and you will get more money (take ten years together) for the other half of labor and land engaged in cotton culture, than if the whole was employed to produce cotton. If this is true, immigration is certainly not to our interest, and why should not the cotton planters consult their interest as well as other people.

DAVID DICKSON.

PICKLING SEED WHEAT.—A correspondent in the *Canada Farmer*, writing on the subject of wheat growing, offers the following:

"An important operation in the process of wheat sowing is too often neglected—I allude to the pickling of seed. First, it points out to us the bad grains which may thus be removed, reducing the per centage of lost seed; and secondly, it strikes the root of smut and other fungi; for it is these very imperfectly formed grains that are chiefly attacked by such parasites. Now smut is found in the imperfect grains, and in such small quantities (as botanists tell us) that it is absorbed in the root of the young plant, bursting out a short time after the earing, throws upon it fungi, in the dark, rusty form with which we are but too familiar. If we simply steep our wheat in water, the light grains which, though too light to be blown out by the fanning mill, are imperfect, will rise to the surface, and may be removed. If to this water we add lime, we shall kill all traces of smut, &c., which may have clung to the otherwise sound seed by contagion with the imperfect grains. But let us remember, above all, that the most certain prescription for the securing of good crops, is a change of seed; get your seed from a different variety of soil."

TO MAKE GOOD VINEGAR.—Take ten gallons of apple juice fresh from the press, and suffer it to ferment fully, which may be in about two weeks, or sooner if the weather is warm; then add eight gallons like juice, new, for producing a second fermentation; in two week more add another like new quantity, for producing a third fermentation. This third fermentation is material. Now stop the bunghole with an empty bottle, with the neck downwards, and expose it to the sun for some time. When the vinegar is come, draw off one-half into a vinegar cask, and set it in a cool place above ground, for use when clear. With the other half in the first cask, proceed to make more vinegar in the same way. Thus one cask is to make in, the other to use from. When making the vinegar, let there be a moderate degree of heat, and free access of external air.

CORRESPONDENCE.

[For the Reconstructed Farmer.]

Proceedings of the Goodwyn Agricultural Club of Granville—Wheat.

Messrs. Editors—Being the first, it is at some sacrifice of modesty that we farmers of Granville are induced to offer our ideas and opinions through the columns of *The Reconstructed Farmer* to the public. But it is with an idea of earnestly urging others of our brother farmers of North Carolina to follow our example, and in this way create and invite an interchange of ideas and experience that will be of benefit to all. To look and see the perfection to which the rings of every other class have been brought, it may not be too absurd to hope that a Farmers' ring may yet be one of the wonders of the nineteenth century. We take it our critics are to be what we are—practical farmers of North Carolina; and with this we offer the proceedings of the Goodwyn Agricultural Club of Granville.

Pursuant to adjournment, the Club met at the residence of Mr. Mike Hester the 28th day of September, 1869, the President, Mr. J. C. Taylor, in the chair. The proceedings of the last meeting were read, and, after some debate, were ordered to be recorded.

Mr. W. Lewis requested the Secretary to read article from the *Southern Planter and Farmer* upon the shallow seeding of wheat.

The President thought it an article well worth attention, and urged upon the Club the adoption of the idea.

Mr. F. Hester, with his experience, was decidedly of the opinion that the turning-plow should never be used in seeding wheat.

The President requested an article read from the *Southern Planter and Farmer* upon saving seed.

Mr. Goodwyn thought it much better to sow seed in the field from the largest well developed heads, than to pick out the grains afterwards.

Mr. W. Lewis had practised that method in corn and other products for a number of years with wonderful success.

Mr. C. Cooper wished to know how to proceed on land to be fallowed during a drouth.

Mr. Goodwyn suggested coultering, then turning-plow and harrow.

Mr. S. Cooper, on tobacco land, had coultered and covered shallow with turning-plow, and made fifty-one for one.

The President asked how to proceed upon land with a thick coating of weeds.

Mr. Hester suggested double plow, with chain to mash the weeds down, and then the drag.

Mr. S. Cooper thought the drag ought not to be used, but let the land be plowed east and west, so as to afford the wheat some protection in extreme weather.

Mr. Goodwyn had yet to be convinced of the benefit of rocks and clods, and wished to know if it was the idea for farmers to prepare clods for their wheat.

Mr. C. Cooper would like to see the roller used here; he had heard of an instance in another neighborhood where, after the use of the roller, 3,000 bushels were grown, and previously but little was raised.

Mr. Lewis had noticed that always where there was a path made through a wheat lot, there the wheat was better.

Mr. Goodwyn thought it a too well established fact to talk about. The idea was unquestionably to plow deep, seed shallow, mash the clods, and throw out the rocks.

Mr. C. Cooper recommended a top-dressing of ashes.

Mr. W. Lewis gave an instance where fifty bushels per acre were sown upon clover and a fine yield cut, and upon the same field where none were sown the clover never grew high enough to cut.

Mr. W. A. Gregory asked the vote upon the kind of wheat to be sown.

The Club was unanimous for what is known with us as the "little rare ripe" red wheat.

Messrs. Gregory and Hester had tried red and white repeatedly the same year, and invariably the yield from red was the best.

Mr. R. V. Gregory said red always stood storms and ravages of the bug better than any other wheat.

It was the opinion of the Club that the proper time for seeding was from the 20th of September to the middle of October; but more wheat was seeded in Granville in November than any other month.

Mr. C. Cooper said wheat ought to be seeded at the proper time. We could not afford to speculate, with free labor especially, upon poor land.

The President spoke upon the importance of meadows; thought they were cheaper, and hay far preferable to other food we fed upon, &c.

Mr. R. V. Gregory asked information how to prepare sown land that was naturally adapted.

Mr. C. Cooper supported thorough draining, and a crop of tobacco. Grass could not be raised where the land was overflowed; the water washing down the grass and covering it with mud, it would finally die out.

After making tobacco the special order of the day for the next meeting, upon motion of C. R. Lewis, the Club adjourned to meet at his house on the 30th of October, 1869.

NAT. A. GREGORY,
Secretary.

The Early Rose Potato.

ROCKY MOUNT, N. C.,
September 29th, 1869.

Messrs. Thigpen & Dancy, Editors "Reconstructed Farmer":

GENTLEMEN—In the August No. of *The Reconstructed Farmer*, mention is made of an experiment made by me with the "Early Rose Potatoes," with a request that I would furnish to your readers the method of preparing the land, manuring, cultivation, &c.

The potatoes were raised in my garden. I had the ground spaded up to the depth of one foot; then trenches opened eight or nine inches deep; then ashes and salt applied, the proportion being two gallons of ashes to one quart of salt, thinly scattered in the bottom of the trench. The potato, cut in small pieces, were dropped in the trench fifteen inches apart; then I applied a table spoonful of Peruvian guano *between* each potato; then a heavy coating of rich compost of barn-yard manure to the depth of three or four inches; then the trenches leveled off; no ridges. When the potatoes were up about three or four inches, I gave them a careful weeding, and after that a good working with the hoe. Nothing else was done.

You know that the season this summer was unusually dry; too dry for Irish potatoes. I planted a second crop in July, and if we could have had a good season, I think I could have made equally as heavy a crop as the first.

Very truly, yours,
M. S. FULFORD.

Dr. Holland says fruit trees in Switzerland are entirely exempt from the ravages of insects, and accounts for the fact by the great abundance of sparrows.

The Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S. DANCY, - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

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Farming as a Steady Pursuit—Does it Pay?

The regeneration of our country, agriculturally, is the chief duty of the hour. All other efforts pale with insignificance when compared with this. At the close of the late war there was a general rush from the fields to the towns and cities for employment, when it should have been the very reverse of this; for the country was wasted by the ravages of war, many of our fields were in broom-sedge, the scarcity of bread and meat in the South was universal. What should have been the course of our young men, all of them? The life of a soldier is an admirable training for the life of a farmer. To endure the scorching summer's sun and the cold blasts of winter, had been the lot of the large majority of our young men for four years, and far better for them and infinitely better for the material interests of our then nearly exhausted country, had they continued in the field, and exchanged the rifle and sabre for the plow and the hoe. Yet singular to say, when every sagacious mind saw the necessity of provision crops, to start the country once more upon a career of prosperity, our young men flocked to the cities and left the fields to take care of themselves. Too much trading and too little producing. Good livings and small fortunes lost when they could have been made.

We have labor, it is true, but not such labor as is wanted. Mere hand labor is not the chief necessity of the hour; we need and must have more brain labor to guide and direct the hand labor and to increase the production of our acres. Quit your counters, young men, and come into the country, where you can breathe the pure air of heaven; where you can increase your physical strength and likewise add to the growth of your brains, by observing nature as she is in all her virgin loveliness. Observe, and be governed by, that quaint and true old maxim,

"He that by the plow would thrive,
Must either hold himself or drive."

The field for money-making in the

South for the next five to ten years, is in our judgment the cotton field. Its production is attracting attention wherever soil and climate suit. The present price is more remunerating than selling "goods, wares and merchandize." The same energy displayed in the merchant's service, if turned in the direction of cotton making, would double your salaries, gain you better health and greater contentment of mind. We want more brains to develope the agricultural resources of North Carolina, and we promise you more pay in our department than in any other, if energy is applied. You have tried the "rag business" for a season without making your fortunes. Come, now, and change front, and try our advice and see which pays best.

The Way to Get and Keep Good Farm Laborers.

The complaint of the want of good hands for farming purposes, has become very general if not universal in this section. Every farmer proceeds upon his own ideas, and often blunders for the application of a little common sense—that very best commodity of our brain. We must discard old ideas to a very great extent, and keep up with the progressive spirit of the age, in this matter of labor as well as in other things.

Now Jack hires out by the month at (say) $10 per month and board, and works satisfactorily until the season for cutting oats and wheat, when he becomes uneasy at hearing that Jim is getting a dollar per day for cutting oats and wheat, and quits his employer. Both Jack and Jim make more money, it is true, for a few days; but the season for saving oats and wheat is soon over, and they are out of employment and have to seek work by the month again. In the meantime their first employer is put to it to supply their places in the very busiest season of the year, has to pick up a second or third-rate hand, his crop becomes grassy, and a loss of five to ten per cent. is the probable consequence in the yield of his cotton and corn. Our friends, Jack and Jim, continue with a new employer until cotton picking time comes, and away they go again, to pick on some other place by the hundred, when they can make their dollar a day.

We have some suggestions to make to our planting friends. First and foremost, hire by the year only, and for wages as a general rule. More labor, steady labor the year round, is what we all want. With such labor we can make our crops, house them, and make more manure; and more manure means larger crops, better profits, and increased capacity to keep more good cattle, with which to keep up the supply of manure. The wages system is far better in the long run for both employer and employee. The farmer knows what he is to pay; the laborer knows what he is to receive. There is no room for a squabble over the division of the crop at the end of the year.

The share system has worked badly in Edgecombe, we think. In adopting it the laborer gives up a

certainty for an uncertainty. Such a season as the present one, with the present high price of cotton, he may come out a little ahead of the wages hands. With such a season as '67, he not only does not make a living, but falls in debt, and has to begin the next year with this debt hanging over him.

Take a greater interest in the welfare of your hands. See that they are comfortable in their quarters, provide good cabins, require them to be kept neat and clean, encourage them to be honest and virtuous, to be provident for their wives and children, and our word for it you will be amply rewarded for this cheap expenditure of your time and labor. Help your hands by precept and example, and they will help you. By all means be prompt and honest in paying them their just dues. Gain their confidence by a frank, manly course, and sooner or later they will appreciate it, and you will not be the loser.

Marl as a Fertilizer.

The most valuable properties of marl consist of phosphoric acid, potash and lime, which it contains in nearly equal proportions. Marl supplies the soil with all the essentials for vegetation, with the exception of nitrogen, and this is furnished by clover. A poor, sandy soil requires not only marl, but a substance containing nitrogen.

Some sanguine agriculturists believe that marl will become as valuable for plant food as the coal mines are to commerce. While the one was formed from vegetable life by the action of ages, the other was formed of myriads of minute creatures in shape and size not unlike a tobacco seed, deposited in immense beds by the action of the ocean. These animalculæ were only a step advanced from vegetable life in their development. These mites of old ocean have left a broad, deep and exhaustless bed of material as valuable in its way as the stratum of coal in the mountain side. These deposits have a deep green tinge, and are called green sand marl. There are three distinct layers, separated by clay deposits, which were probably formed at three epochs. The layers are remarkably uniform, varying but slightly at the top and bottom. The strata themselves are from fifteen to thirty feet thick. In some places the marl is within three or four feet of the surface, so that by removing a slight top layer of sandy loom, the bed may be reached; but generally a stratum several feet thick of spurious or useless marl covers the green sand. As a general thing the lower or the older the bed, the less phosphate of lime it contains and the more carbonate. In some of the beds are found shells which crumble between the thumb and the finger, and recently a shark's tooth was found which belonged to a monster of immense proportions. Usually, however, the beds are uniform in color and appearance, the spade cutting it as easily as a knife passes through a green cheese. The lumps as thrown out cling together until they become dry, when

they crumble and become as fine as an ash heap.

At first marl was sought for the potash it contained; but when analysis subsequently disclosed the fact that it contained phosphoric acid, Professor Mapes and other eminent agriculturists hailed it as an important discovery which would add greatly to the wealth of the country. As a rule the more nutritious a grain or root the more phosphate it takes to grow it. A field without phosphorus is incapable of growing grain, and no plants suitable for food can be properly cultivated without the co-operation of this substance in some form.

A ton of Peruvian guano, containing four hundred and seventy pounds of the phosphates, costs eighty dollars. The same amount of money will buy eighteen hundred pounds of phosphoric acid, besides as much more of potash, of which there is little in guano.

The use of marl as a fertilizer is now attracting the attention of agriculturists in this section, it having been demonstrated by a practical test that it can be made as active and lasting a fertilizer as the best super-phosphates sold in the markets, and at a cost so trifling as to defy competition. Hon. Benjamin T. Biggs, member of Congress from Delaware, a careful and practical farmer, made a trial of ammoniated marl, which had been treated and nitrogenized by a new, patented and cheap process, with entire satisfaction.

This process can be put into use without expensive work, and ammoniated marl, equal in value to Coe's, Phillips's, or Baugh's best phosphate of lime, can be sold at less than one-fourth the cost to the farmer.—*Phil. Pathfinder.*

Work for the Month.

Let cotton picking be pressed during November, if you have not already housed your crop. The earlier the "staple" is gotten from the fields after it opens, the better it is, for it is both heavier and more oily, and consequently will command a better price. After November, in this climate, cotton picking "drags its slow length along;" the mornings and evenings (often the whole day) are sure to be cool, and it is an uphill business to get then the latter part of your crop in. So be up and stirring early in your cotton fields.

Corn and peas should claim all the time in this month not devoted to cotton. Get as much of both in your barns as possible before winter sets regularly in. Give your hogs and cattle attention also, and don't let them get too thin during the winter. Hogs, fattening for pork, should be made comfortable, with bedding and shelter as well as with food. They both pay well, and will make your corn pile larger; for the better they are cared for, the sooner they will be ready for slaughter.

We take pleasure in saying that our laborers generally, black and white, have done better this year than any year since the war. Many seem to realize fully their responsi-

bility to themselves and families and to the general welfare of the country. We are glad to note this change, and will be always ready to give due credit where credit is due.

Our Exchanges.

The Southern Cultivator for October has reached us. We can do our planting friends no greater service than to call their attention to this agricultural magazine. It is the leading representative of that revolution in Southern farming, which has been inaugurated since the war, with such happy results. Its editors, though progressive, are evidently cautious men, attaching great weight to experience, as is shown by the large number of articles in every issue, written by practical farmers in all the Southern States. Its corps of contributors is unrivalled. We notice that the publishers continue to furnish to new subscribers, the letters contributed by Mr. Dickson, embodying his experience and practice. These alone are worth 20 years subscription. If you have never seen the paper, send a stamp to *Southern Cultivator,* Athens, Ga., for a specimen copy, and examine it for yourself. Price $2 a year.

American Agriculturist, Orange, Judd & Co., N. Y., for October, is before us, full of interesting matter as usual and splendidly illustrated. Single copy $1.50.

Tilton's Journal of Horticulture. Well gotten up in every department and beautifully illustrated. Price $3 per annum. Address J. E. Tilton & Co., Boston, Mass.

Gardener's Monthly and Horticultural Advertiser of Philadelphia. Edited by Thomas Meehan; published by Brinckloe & Marot, at $2 per annum. A spirited and well conducted monthly.

American Farmer, by Worthington & Lewis, Baltimore, Md., at $2 per annum. The October number is not behind its predecessors.

The Maryland Farmer, S. Sands Mills & Co., Baltimore, Md. Price $1.50 per year. Full of interesting matter.

Prairie Farmer, Chicago, Illinois. The best agricultural weekly in the country. Established 1841. $2 per annum.

The Cultivator and Country Gentleman, (formerly well known as the Albany *Cultivator,*) by Lewis Tucker & Sons, Albany, N. Y. A valuable weekly of long and well established reputation. Price $2.50 per annum.

Farmer's Home Journal, Lexington, Ky.; $3 per annum. Ably conducted by James J. Miller, editor and proprietor.

The Peanut Crop.—Most of the planters in this section are now gathering in their peanut crop. A large area of ground was planted, but the severe drought so injured the growth that the crop will fall short. Gentlemen from the counties south of Petersburg inform us that they will not realize half a yield—in many instances not as much as that. This is very unfortunate, as large expectations were based upon this crop. *Petersburg Index.*

Horticultural Department

Rev. J. B. CHESHIRE, D. D....Editor.

Autumn—Treatment of Orchards.

There is no season when our orchard trees are so little cared for as during the months of August and September; and yet that is the most critical period of the year as regards the health of the tree, and the crop of fruit of the succeeding year.

Gathering the maturing crop (often with violence to the tree) so absorbs the attention, that care for the future is forgotten.

The double duty with annual bearers (of maturing one crop, and preparing for another at the same time,) and the vicissitudes of the season of drought, often so exhaust the vitality of the tree as not only to damage or destroy the succeeding crop, but to endanger the life of the tree when not protected.

At the West, where excessive drought is the rule rather than the exception during this season, is the statement particularly applicable.

The formation and proper growth of the fruit buds on which the succeeding crop depends can only be effected where the tree is well nourished and in a healthy and growing state. A full supply of nutriment and moisture is indispensable.

The reason that summer pruning induces fruitfulness is that it lessens the means of exhaustion, and thereby invigorates the remaining branchss at the season when the germs of the future crop are forming.

Nor is the injury to the crop the only evil from neglect or other causes resulting in defective nutrition. It is doubtless the last and closing act of the season to deposit in the tissues of the tree nutriment for the early growth of the leaves and fruit buds. As the leaves are the elaborating organs, there can be no nutriment elaborated till they are formed; hence the necessity for such deposit.

The grain of wheat or corn contains nutriment for the expanding germ, and sustains it till the organs of nutrition are produced.

The grape or currant cutting furnishes food to sustain its growth until the rootlets are formed; and such is the universal law or requirement of nature as applied to both vegetable and animal growth.

The cultivator should see the requirements of nature met, and that no untoward influence interferes to thwart her designs at that critical period.

If the soil ceases to furnish the necessary food for the tree, or if excessive drought exhausts the moisture, rendering the soil so dry and compacted as to check the growth prematurely before the fruit germs are developed, there can be no blossoms; or the blossoms will prove abortions, and the fruit will fall prematurely, or be scabby and defective; or, in extreme cases, the starved tree will, in its efforts to perform its functions, exhaust itself; the bark will die, and loosen at the collar or base of the limbs, producing permanent injury or death.

An occasional season occurs when cuttings unaccountably fail to grow, although the spring season seems favorable. The cause is evidently starvation by excessive drought or other cause the previous autumn.

If the young shoots taken for cuttings are deprived of generous nourishment at the close of the growing season, they will not contain the necessary material to develope a perfect plant; the buds will burst, and make a feeble growth; but the elements of growth are exhausted before roots are formed; and the cutting dies from exhaustion, as the

nurseyman observes to his sorrow. The cause and effect are the same in the fruit bud and the cutting.

Careful or generous cultivation or mulching, so as to secure a regular and constant growth through the entire season, is evidently the proper remedy.

There may be danger of *too high* cultivation late in the season, producing a succulent growth that may be injured by the cold of winter; but experience, I think, will show that there is less danger in this direction than the opposite.

The fruit buds of the peach and other delicate fruits, which are easily excited, are frequently prematurely developed by warm and wet weather in the fall, and, when so developed, are sure to be killed by the first severe cold; but such development never occurs except after a season of rest.

If the growth is regular and constant through the entire season, there is no danger; but if, after the fruit buds are formed, severe drought occurs, so that the growth ceases and the leaves mostly fall, and subsequently the buds are stimulated by very warm and wet weather, they will swell, and the injury follows of course.

My conclusions are, that to preserve the health and vigor of our fruit trees, and insure a regular production of fruit, requires the most careful treatment during the last of summer and early autumn, counteracting the effect of extreme drought or extreme wet, and effecting a uniform, constant and healthy growth, till the gradually advancing cold strips them of their foliage, and consigns them to their annual rest in a normal state.

An excessive growth is never healthful, but is particularly injurious at the close of the season. The growth should be gradually checked, but only by nature's proper agent—the cold winds of approaching winter, the lullaby that puts them to sleep.—*Jour. of Hort.*

Timber of the Kentucky Coffee Tree, (of the *Gymnocladus Canadensis.*)—A correspondent of the *Prairie Farmer* says: As a timber tree, it might be planted to advantage for the following reasons, which are given *seriatim* in answer to the queries:

1st. Because it is valuable.

2d. For ornament and use in the arts, as posts, rails, cross-ties, sills, sleepers, &c., but more particularly for wainscoting and door styles or panels, on account of the fine contrast of colors it presents, and because of its susceptibility to take a high polish; the colors are dark and light, in strong contrast; hence it has been called the American Zebra wood.

3d. Because it is durable, much more so than the white oak; even small growths are used by surveyors for stakes.

4th. It will make good sills for buildings, even where exposed, and ought to make good cross-ties for railroads.

5th. It will split freely, but it is apt to be twisted so as to make the rails crooked, the wood being strong and heavy. These are all well suited for riders.

Indeed, this tendency to twist and split amounts to an objection. The native logs are seldom more than fifteen to eighteen inches in diameter, always too crooked for hewing long sticks, and very apt to be split or shaky.

Experience says plant young trees for several good reasons. They cost less at the nursery, expense of packing and transportation is less, and losing but few roots, they are more certain to live.

Why Fruit Trees are Barren.

Trees that expend all their forces in the production of wood-growth, can produce little or no fruit. Indeed it is not possible for any tree to perfect a fruit-germ, and not again, in some way, disorganize it, unless the wood-growth shall cease in time for the leaves to elaborate food enough to grow both leaf and fruit the following year, or until a part of the leaves shall attain to nearly or quite their full size. That this is so will be apparent when we consider that the leaves which first appear in the spring were formed in the buds the previous year, perfect in all their parts, and in the embryo state contained each individual cell found in them when fully grown.

The question may arise if there is no addition to the number of cells, how do the leaves grow? The answer is that the only difference we can see between an embryo leaf and one fully grown is in the size of the leaf-cells. As growth begins in the spring, these small cells, which were formed in the previous year, began to expand. Each individual cell thus enlarges, until all the numerous cells of which these leaves are composed are of full size. To further illustrate this, let us suppose, on a brick wall, that each brick at the same time, was gradually to expand to several hundred times its present diameter, and you have just what takes place in the growth of an embryo leaf. Here we have a tree in possession of a full grown leaf. This leaf did not form itself, but was formed by the tree in the preceding year.

To produce and sustain this cellular enlargement, there had been stored the previous year a large share of nutriment in the buds and in other parts of the tree.

This nutriment must not only be sufficient to feed the embryo leaves, but must also be sufficient to produce the small warty excrescences—the rootlets and spongioles. These new leaves and spongioles are the tree's labaratory. And those leaves and spongioles first grown were made, with the exception of moisture, wholly out of the materials that were stored by the tree during the growth of the previous year. When these vegetable stores are in sufficient supply to do this, and nourish the fruit-germs also, then we shall hear little about imperfect fertilization. On the other hand, had the food been consumed the previous year, by ripening an over-crop of fruit, or by making a very succulent growth, then the tree would not store a sufficient amount of plant food to perform its three-fold office in the production of leaves, roots with their spongioles, and fruit.

In this condition, a part of the leaf, and a larger part of all the fruit buds, yield up their nourishment, which goes to the production of root and leaf growth. The tree, therefore, is barren of fruit for the summer, its whole growth being required to recuperate its own vigor. Such trees often bloom freely, and then cast their blossoms. When this occurs, uninformed persons often attribute it to want of fertilization, or suppose that the rain must have washed away the pollen.—*Dr. Hull.*

Weeds on walks may be kept under by watering the gravel with the following solution: Dissolve two pounds of blue vitriol in an old pan, and then dilute it with six or seven gallons of water; apply this through the fine nose of a watering pot, and it will destroy every sign of vegetation, and after a shower, render the gravel as bright as when just put down. The walk should not be trodden on when newly wetted, as the vitriol will destroy the shoes.

Directing the Tops of Fruit Trees.

If you wish to have flavor in fruit, you must hang it on the outside of the tree. Inside fruit, or fruit grown in the shade, is sure never to mature. It will lack color; it will lack fragrance and flavor; will be less crisp and juicy. It will also be less healthy. All fruit should be kept on the outside of the tree, and distributed uniformly. It is no excuse to say the orchard is large. What pays in one tree will pay in a thousand. We may as well have good fruit, all of it, as not. Some trees will do their own thinning; but many will not, and must be attended to, if good, fair, and uniform fruit is desired. By thinning and distributing, the tree will be strengthened for future bearing. It will have a good look, with the fruit all visible, and all alike and all good, as good as sun and air can make it, and not so apt, in a rainy day, to become mouldy.

Where the crop is dense and the circumference close, there should be an opening made at the apex, a thinning out of the branches. Some trees will do this of themselves, but if not it must be done by the pruner. This not only to let the moist air out, but the moisture from the ground where the branches reach it, the tree seeming like an inverted cup, holding the moisture. Fruit inside of this in a wet season will necessarily be spoiled.

There must be air, and light, and a degree of dryness for the fruit. If a little sun gets through the apex or elsewhere, it will not hurt the fruit. It breaks the monotony also, and adds to the beauty of the tree. An orchard may thus be treated artistically and æsthetically, and be made an object of interest to the eye, while at the same time the beauty will be heightened by a sense of the profit. Utility is always a good foundation for beauty.—*Country Gentleman.*

Winter Apples in Piedmont, Va., and North Carolina.—In the *Planter* of March you complain of the great want of winter apples, and speak of Winesap and Albemarle Pippin as the only winter varieties worthy of cultivation. If you will examine the map, you will find that Person county, N. C., joins Halifax, Va. We are in the midst of the Piedmont region, and what I wish to say is applicable to that region generally, and to the most of your subscribers. Please allow me to say that I have tested as winter apples the following, viz.: Hall Seedling, Romanite, Henry Pippin, Green Skin, Rawle or Neverfail, Vandedere, Esopus Spitzenberg, Ben Davis, R. I. Greening, Hyco Sweeting and Warren Gully. I have extended your list to a baker's dozen, and will guarantee to any person giving any of the above good culture on a soil that is not wet or water-logged, that they will not complain of the want of good winter apples.—*Southern Planter.*

The Evening Primrose.—A writer in the *Rural World* says:

"We have one kind of evening primrose in our garden that is a perfect beauty. It is Enothera macrocarpa, or large flowering. It is a perennial; hardy; has lived over winter uncovered and unharmed; it is of low, dwarf, spreading, compact habit, not growing over one foot high, and is perhaps two feet broad, with a dozen or more shoots or stems, each stem prepared to furnish, each evening, one of its large, most beautiful, brightest of sulphur-yellow flowers —a charming yellow indeed. The flowers are nearly five inches across, and it is quite amusing to watch them and see them expand, which they do by jerks that are very perceptible."

Succession of Fruits at the South.

In your number for June 10, you give, in answer to a correspondent, the Summer Rose, Carolina Red June, American Summer Pearmain, and Maiden's Blush, as a succession of early apples; and Early Tillotson, Large Early York, Crawford's Early, and Oldmixon Free, as a succession of peaches.

The Summer Rose is an excellent apple, and is perfectly at home in the South, but it begins to ripen altogether too soon to form a succession to the Carolina Red June. In fact, you can pick Red June later than you can Summer Rose, as well as earlier. But the Summer Rose, although unsurpassed in quality and bearing, is both smaller and more ephemeral in its ripening than the Cartlina Red June; and so, if but one of them could be planted, I should prefer the Red June. The American Summer Pearmain is beyond all comparison, I think, the best apple of its own or any other season, and succeeds perfectly at the South. If it has a competitor, it is the Julian—a Southern seedling that you Northerners know but little about, practically. The tree of the American Summer Pearmain, as you are aware, is neat, symmetrical and small, while the Julian is a remarkably healthy vigorous grower, and makes a tree of mammoth proportions, and at the same time bears early and abundantly. I hardly know how I should decide between them, were I obliged to choose but one. A careless cultivator should take the Julian, as it is better able to hoe its own row. The Maiden's Blush is too variable in the South to be recommended either for family use or for market. It ripens very nearly with our great Southern summer apple—the Yellow Horse—and is immeasurably inferior to it in nearly all respects. In ten years after planting, the Horse apple will mature ten times as much fruit, of a far better quality, than the Maiden's Blush. I have ten or fifteen trees of the latter, some twelve years old, and would gladly exchange them all for a half dozen such Horse apple trees of the same age as stand beside them in the same orchard. The Lowell, Gravenstein, Hebron's Surprise, (local name,) Summer Rose and a hundred other varieties, are much to be preferred, here in the South, to the Maiden's Blush.

Your list of peaches is better, and if you will leave out the Large Early York—a grand humbug, in the South at least—and substitute Cole's Early Red or Early Chelmsford, I will not quarrel with your selection.—*H. A. Swasey in Country Gentleman.*

Look to Your Evergreens.—It is supposed that those who last spring set out evergreen trees of any variety have followed our oft-repeated advice to select specimens that were well branched from the ground, and had a strong main stem, and but one stem. Well, this being the presumption, the next thing is to secure the health and developments of these nether branches; for without them evergreens are, in almost any position in which they may be placed, a "sight not to be seen." To do this, all the soil beneath the tree, and for a few inches beyond the extent of the branches, must be kept entirely free from grass and vegetation of all kinds. For this purpose the garden fork must be used—no spade or hoe should ever be employed about young evergreens unless in the hands of a competent gardener, or to cut the outer edges of the grass in forming the circle around the tree. After the tree has been transplanted six or eight years, it will require very little attention of this kind, as the

heavy, dense lower branches will smother out all attempts at successful vegetation beneath them.

But while young this loosening up the soil and removing the grass and weeds must be repeated several times in a season, and at no period more effectually than now.

We clip the above from that excellent authority in horticultural matters, the *Germantown Telegraph*, and commend the advice. — *Southern Horticulturist.*

Annual Root Fibres.—It seems after preaching for years, our doctrine of annual root fibres is meeting with general acceptance. Except that the old notion about spongioles or mouths to the fibres is exploded, the following from the *New England Farmer* is correct. Plants however do draw in their food from the ends of the fibres, call them spongioles or what we will :

"If you examine the roots of trees in the spring, especially roots of last year's growth, you will find no spongioles attached to them, but in their place, innumerable little excrescences, each composed of many cells. From these cells, new rootlets are produced, and to these new rootlets the spongioles are attached. These spongioles are not true roots, any more than leaves are true branches, and they never become roots any more than leaves become branches. As the leaves extract nutriment from the atmosphere so the spongioles absorbs it from the soil during the growing season. When their work for the season is done, they separate from the roots and decay in the soil, just as the leaves fall from the branches, and decay on the surface. Could we see the entire tree, root and branch, the parts below the surface and the parts above, during the growing season, we should see the roots and rootlets clothed with hairy spongioles like a coat of fur, while the branches are clothed with leaves woven into tissues of various forms and degree of thickness and firmness. When the growth for the year is over, and the season of rest, the sleep of winter comes on, both leaves and spongioles are thrown off, and the tree, divested of all its clothing, remains naked and unprotected through the frost and bleak winds of winter."

Flowers at Marriage Feasts.—Describing a New York wedding, a daily paper says :

"A person standing on the lowest floor could see to the very roof of the house, when, to use an expression of one of the guests, you were reminded of a tropical mountain in full bloom. Of course all these flowers are not raised in or near New York. The green-houses of Boston, Philadelphia and Baltimore were ransacked for the occasion. One may get an idea of the exhibition when we say that it brought into use 10,000 camelias, 100,000 primroses, 25,000 white azalias, and 2,000 head of daphnes. The collection, altogether, was probably the finest gathering of exotics ever brought together in one house. Forty persons were occupied some days in preparing the framework, and they were all engaged during the whole of Tuesday night in arranging the flowers."

The Large Trees of Texas.—The large court-house of Navarro county is said to have been covered with shingles made from a single cedar tree. The oaks, pecans and cedars of that section of the country attain an immense size. A pecan tree in Navarro county, on the banks of the Trinity, measured twenty-three feet in circumference. The cedars are often more than 100 feet high.—*Gardener's Monthly.*

KEEPING FRUIT—*Nyce's System.* At a meeting of the Cambridge Horticultural Society, Feb. 3d, Mr. Hervey Davis exhibited twenty varieties of Autumn and Winter pears, which were taken from the large fruit-house of the Massachusetts Fruit Preserving Company, at Cambridge, on January 30th, of which only five or six kinds were ripe enough to eat. The others were hard and sound, and would require from three to five weeks to ripen. He said he had eaten Surpasse Virgalieu and Dana's Hovey as perfect in quality as when fresh from the trees. From what little experience he had had, he thought it important that fruit should be in perfect order when put into the house. It should also be gathered directly from the tree, though he had put some Sheldons in the house which had been exhibited in Boston, Cambridge and Concord, and they had kept very well.

Mr. J. V. Wellington, of Cambridge, exhibited at the same time beautiful specimens of Lawrence, Duchess, Buerre Deil, Winter Nelis and Beurre Clairgeau, which had all been taken from the house the first week in January. He began to take out his Bartletts in October, had shipped a large quantity, and had never heard any complaint of their quality; a few he thought did not retain their flavor as well as others. The Flemish Beauty was hard to mellow. The Duchess he found more difficult to ripen than those kept in the ordinary method. Winter Nelis and Buerre Deil held their flavor best, as far as he had observed; being as good as if they had not been in the house. Inferior fruit should never be put in. After taking the fruit from the house, it should be kept rather cool, then put in a warm place, but not too warm, and all fruit should be kept in the dark, if possible. Fruit wanted February first, should be taken out of the house January first; it required twice as long to ripen them, and after they were ripe they would keep as long again as those that had never been in the house.

HYBRIDISM IN FRUITS.—It has been stated that there is some evidence to show that the character of one variety of the strawberry was affected by growing in the vicinity of other sorts. Hiram Walker, of Washington county, N. Y., who has practiced grafting since 1818, writes that according to his experience, the same thing takes place with apples and other fruits, and he thinks the fact that some Winter apples do not keep, is not due to their being grafted on stocks of early varieties. He says he never knew any difficulty in the keeping of fruit, where the orchard was all of one kind, but that when early and late sorts were all together, late fruit was rendered early, and early fruit made late, from cross impregnation. He mentions a tree in Saratoga county which was in part grafted with a sweet variety, but the grafts bore sour apples for several years; the grafts of the sweet apple had been put into the lower limbs of a sour apple tree, and as long as the upper limbs of the original tree remained, the sweet grafts bore sour fruit, from blossoms being impregnated by those on the limbs above them; when the natural limbs were removed then sweet apples were produced. Mr. W. mentions other instances of a similar character which have fallen under his observation. The subject is one not only of scientific interest, but of actual importance to all fruit growers. It is within the observation of every one that a variety of fruit is not the same, even in widely separated localities. Other points on this subject are needed.—*Utica Herald.*

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R. C. TILLERY, M.

From Dr. Fentress, an accomplished and experienced physician.

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J. J. Lawrence, M. D.—Dear Sir: I have carefully examined the formulas, as well as the The put up lies of your Koskoo compound, *and have prescribed it* in some *stubborn* cases of *Chronic Liver Affections pepsia. General Debility, &c., and always with the most gratifying results.* I find it to be a splendid *Alterative, and Hepatic* combination, accomplishing its constitutional effects *without the slightest del* in fact, *it gives fine support to the General system* while its alterative effects are being produced. *I chee recommend its use to the public.* Yours, truly; T. J. FENTRESS, M.

KOSKOO *cures Scrofula in its worst forms.* From Mr. A. W. Mills, a prominent and well-known mer of Norfolk, Va, No. 11 Main street, Norfolk, Va., September 15, 18

Dr. Lawrence—Dear Sir: Your Koskoo has worked wonders in my family. My daughter has been a su from Scrofula since childhood. She lost thirty-one pieces of bone from her ankle, several from her arm sides having ulcers in several parts of the body. Whilst in this condition she commenced taking Ko *it acted like a charm on her—under its use the ulcers gradually healed, and her general health greatly proved.* It certainly saved her much suffering, and perhaps her life. I regard Koskoo a *specific* for all ulcerous affections. Your Koskoo also cured my wife of dyspepsia, from which she suffered greatly. *She is now better health than she has been in five years.*

With the highest regards, I am gratefully yours, &c., A. W. MILLS

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Yours truly, N. A. H. GODDIN, M. D.

KOSKOO CURES CHRONIC RHEUMATISM.

Norfolk, Virginia, September 7, 186

Dr. J. J. Lawrence—Dear Sir: My son *has received so much benefit from your wonderful Koskoo* t cannot refrain from expressing my gratitude. I had tried almost everything without benefit. I believ all sincerity, that your KOSKOO IS AN INFALLIBLE REMEDY for the disease from which he has suffered, and as I can learn, has *never failed*. If you only knew the immense amount of suffering that he has under then you could *conceive the value of such a remedy as Koskoo*—THAT SURELY CURES. The great amou good it is *now doing* among us is *inestimable*.

With much gratitude, I am respectfully yours, &c., MRS. M. E. A. NELSON

Dr. Lawrence—Dear Sir: Having been treated by several skilful physicians for Dyspepsia, Chronic D of Kidneys, General Debility, &c., without benefit, as a last resort I commenced the use of your KOSKOO, an pleased to say that under its use my health has been ENTIRELY RESTORED.

I am, sir, with much respect your obedient servant,

No. 5 Market street, Norfolk, Va., July 6, 1869. O. B. MEARS

Pacific, Franklin County, N. C., September 13, 186

This is to certify that for a long time I suffered very much from *inaction* of the *liver* and *constipation* bowels and tried several remedies, but received no benefit until I commenced taking KOSKOO. I took medicine about one month, and I was completely *cured* and have remained well. I know of several *cures* by Koskoo, and can cordially recommend it as a good medicine. JOHN H. BAKER

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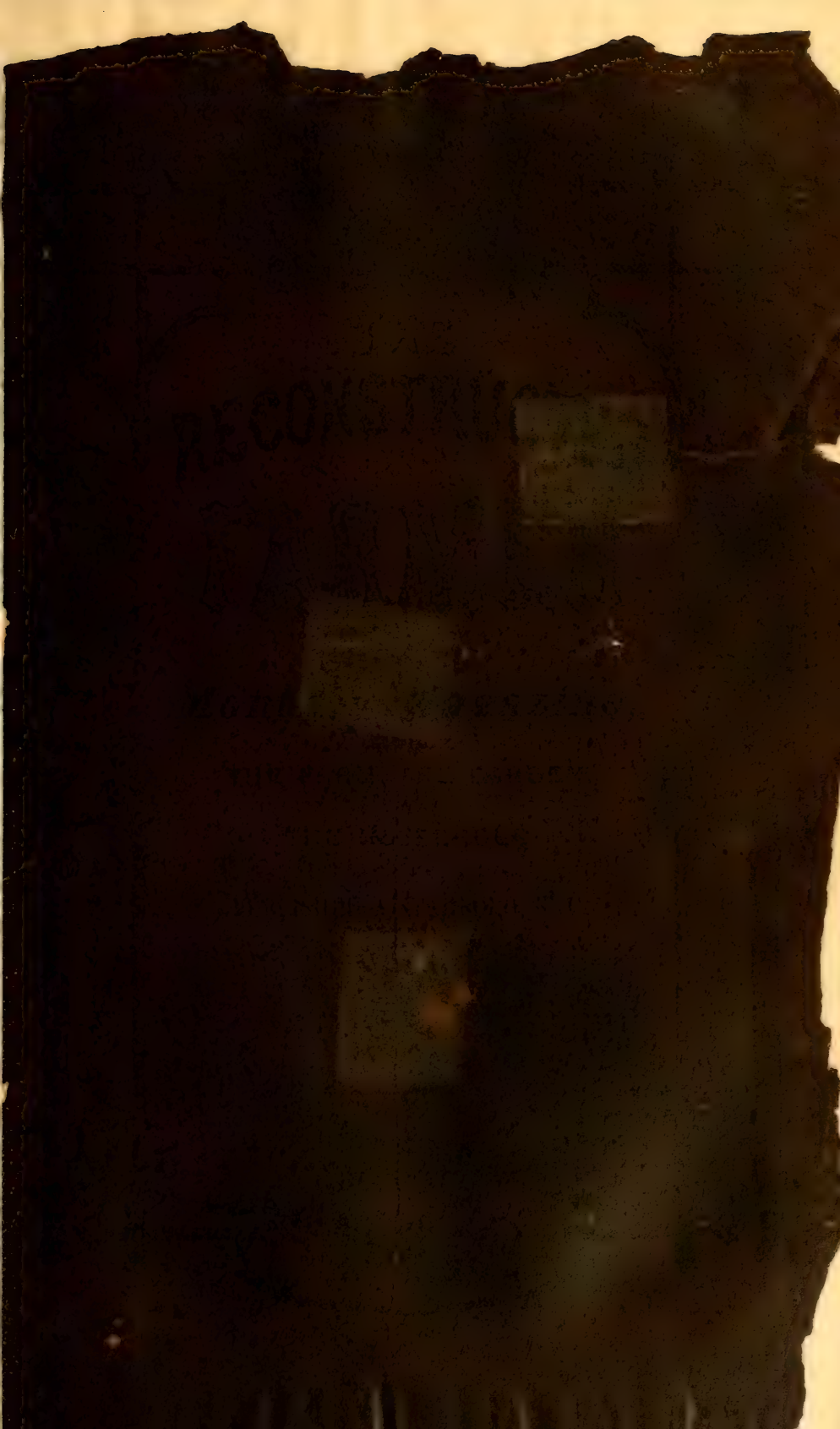

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THE
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JAMES R. THIGPEN,
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For the "Howard Amendment," Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

VOL. 1.] TARBORO', N. C., DECEMBER, 1869. [No. 8.

David Dickson on Immigration.

SPARTA, GA., June 10, 1869.

Editors Southern Cultivator:

I wish to draw the attention of the cotton planters of the South to the subject of immigration. It is one of great interest, and if successful, I think will prove destructive to the cotton interest. I do not wish my views to prevail unless they are right. I wish both sides to be heard, and hope those who can wield the pen, and who agree with me, will be heard; the other side has been heard already, and we have been taxed to promote this cause. The State of Georgia is moving for our destruction.

The negro we have with us, and we cannot get rid of him if we would. They will not die out, as most of our northern friends and many of our people think. The next census will show a great increase. The only way to make it tolerable for them to live amongst us is to give them employment. With full employment they will steal less, be more law abiding, and a less nuisance in every way. Do we want more labor, and for what? The agricultural interest of the South is chiefly valuable for its production of cotton, tobacco, and rice. Can we make more money by doubling the quantity of labor than we can out of what we now have? Do numbers increase the quantity of labor *pro rata*, or will the dividends be greater for all concerned? Can the first million of people in Georgia, having the first choice of lands to cultivate and the balance for pasture, make more or less than the second million, having the poorest half to cultivate, and no waste land for stock to graze on? Is the second million likely to be more skilful, law abiding, enterprising, &c., &c.? I think history teaches us that a population, with a plenty of room and land, are more cheaply governed than a dense population—can live better, and can have more labor to spare for improvements. What country has built the same amount of railroads and factories as the United States? The United States, having plenty of lands to cultivate, by selecting the best, can, with one-half of its laborers, make a plenty of all the products of the soil, whilst the other half can build railroads and machinery of all kinds, and work them. The cotton States, with its present labor, can build more railroads, erect more factories, develope more mines,

carry education and refinement to a higher point, than if the population was increased four fold. With cotton at twenty-five cents per pound, you have money to do whatever you wish collectively. In 1848 and '49, with 900,000 to 1,000,000 bales of cotton in Liverpool, cotton sold at $4\frac{1}{2}$ to $5\frac{1}{2}$ cents. With 350,000 to 400,000 bales at present in Liverpool, cotton is selling in Augusta from 25 to 29 cents per pound. Why do you wish to make the change? Our northern friends say if we do not produce cotton cheaper we will lose the trade. I am willing to lose it, if it can only be held by making cheap cotton. If they would take a little more interest in preventing the loss of our liberty, instead the loss of the cotton trade, it would inure to the benefit of both sections. Give us our liberties and constitutional rights, with our best men to represent us in all our departments, and we can make as much cotton as the world wants, at fair prices, if it be 10,000,000 bales, without an outside man or dollar. Good government would do more to develope this country than all the men and money in the world.

Cotton planters, it is not to your interest to sell your land at a mere nominal price. How can you invest you money to any better advantage? Land must advance in price. In thirty years, without a single immigrant, Georgia will have a population of two millions—the sons and daughters of the present population. Be patient; wait for the natural increase, and what may voluntarily come. Do not spend your money to hasten an over populated country. It will come soon enough, and when it does come you will have no outlet. Some are willing to cut their lands up into small lots, and give every alternate lot to immigrants, thinking it will more than double the price of the balance. What do you care what your lands are worth, if you have none to sell? Besides, it would reduce the price of cotton more than one-half, and the land you have left would not pay, per acre, one-half of the dividends they do now—reducing your profits three-fourths, you have plenty of native poor people to sell land to, if you wish to part with any.

Do those who have no land wish competitors in labor, and in the land market, reducing your wages one-half or more? Do you wish a great increase of money capital, reducing the rate of interest to the standard of Europe, causing all property to rise in proportion to the fall of interest? Your wages are fixed by the surplus of cotton you have to export and the price it will bring in Liverpool. Your prosperity depends upon the scarcity of labor and a high rate of interest. You have nothing but your honor—you cannot borrow money even if it gets down to two per cent. The value of your labor being fixed by the value of cotton in Liverpool, where interest is low, you can, by residing where it is high, acquire proportionally much more land in a given time.

To those who have land to sell, or more than can be worked, let me say the very scarcity of labor will make one-half of your lands bring in annually more money than if all was planted—the other half is worth five per cent. to grow broom sedge for grazing, and will advance more than five per cent. annually. For the safety of the manufacturing interest, especially in cotton, it is not prudent to push it too fast—not faster than markets can be found for the products manufactured. Just as sure as the winds return the water, to be condensed and fall again above the shoals, the people here will possess the money and energy and skill

to put the water to work; and to effect this most speedily, we want a scarcity of cotton and correspondingly good prices.

With cotton at twenty to twenty-five cents per pound, we can in Georgia appropriate ten dollars towards increasing our manufacturing interest with more ease than one dollar, with double the labor, and cotton eight to twelve cents. Where are the laborers best clothed and fed? Where labor is scarce. Where does land pay the best profits? Where labor is scarce; and the reason is, the products of the farm bring the best prices under these circumstances.

I am equally opposed to begging for money to be brought to the South to be invested. If capitalists come of their own accord, let them come; but it is not to our interest that they should. You now own the property of Georgia; if you sell one-half of it, you will own but the other half. It is very difficult to transfer real property from one country to another. The most you would get would be the means to live and dress fine for a few years.

What we want is a system of saving and properly investing each year. We could and ought to save annually $15,000,000, to be invested in machinery. That would pay future dividends, to be reinvested. I am for more labor, too, but I want such as we may never regret acquiring. Accumulating all sorts of labor-saving machines; improve your land to a capacity double its present rates; improve your systems double what they now are. Learn to do fully fifty per cent. more work, with the same labor, that is now done, and with more ease; learn to apply your labor to greater advantage than is now done; do all this, and more too, which can be done, and you will find your products ample, without any increase of population. Leave the subject of immigration to time and the free will of those who wish to come among us and be of us.

We owe our prosperity at this time entirely to the scarcity of labor—many negroes having refused to work; others being employed in repairing torn-up railroads and building new roads. If all the negroes had gone to work on the farms, and done full work, it would have taken twenty years to reach our present situation. The scarcity of labor is the only blessing we now enjoy as a result of the war.

The scarcity of labor in the South gives us the proceeds of the very labor some people wish to transfer here. The profits of one hand in the cotton field gives us the labor of two in Europe. Transfer him here, and we will compete with the labor we now have, or he will labor with those we now have to lessen their profits and bring about a state of things which will get up strikes. You must recollect a strike in the cotton or harvest field is not like one in a cotton mill or on a railroad. If the mill stops, what has been done is not lost; if the hands refuse to move any dirt, what has been, remains. Not so with wheat and cotton—all is lost, unless you continue to advance. The guano must be pumped up into the cotton bolls, and they must be gathered by uninterrupted labor.

One more point I will mention, and then leave the subject to be discussed fully, I hope, by abler pens. The press of the South has labored earnestly to get the cotton planter to make all his supplies at home, urging him as being the cheapest policy. Now, every cotton planter knows that nothing pays as well as cotton, and all the presses in the world cannot change his opinion.

But if the press will strike at the root of the evil, they may do incalculable good. I will state what it is—I have always practiced it—both the true interest of the cotton planter and patriotism should make all adopt it: Apply one-half of all labor and land to the making of full supplies of all kinds that are needed on the plantation, and enough to spare for those engaged in other pursuits. Do this, and you will get more money (take ten years together) for the other half of labor and land engaged in cotton culture, than if the whole was employed to produce cotton. If this is true, immigration is certainly not to our interest, and why should not the cotton planters consult their interest as well as other people?

Very respectfully,

DAVID DICKSON.

"Mr. Dickson on Immigration" Reviewed.

Editors Southern Cultivator:

I have great respect for Mr. David Dickson as a practical agriculturist, and have, in common with a large body of the intelligent farmers of the country, adopted with profit many of his valuable suggestions, which, in the main, prove him to be a thorough, energetic, and progressive planter; but when Mr. Dickson quits his familiar Georgies, and turns political economist, he erects the standard of revolt against the authority of Hume, Ricardo, Matthews, and Adam Smith, and loses at least one humble follower.

In his last letter to the *Cultivator*, under date of June 10th, Mr. Dickson plants himself squarely against the immigration movement as being fraught with consequences, as he thinks, most disastrous to the best interests of the country, maintaining that "the State of Georgia is moving for our destruction." His first position is that "the negro we have with us, and we can't get rid of him if we would"—a melancholy fact which no one can gainsay—but the plan which Mr. D. has fallen upon to mitigate the evils attendant upon the presence of the population in our midst, exhibits a cruder knowledge of the present animus of this race than we had supposed so keen an observer to possess. He urges that the only course to pursue towards the race is "to give them *employment!*" Mr. D. is possibly taking his stand-point (to make use of a Teutonism) from the emancipated negro as seen in Georgia; but if he were here in Mississippi he would find that a large and rapidly increasing mass of this negro population would not so willingly accept the proffered "*employment,*" which he would give them as a correction of the evils flowing from their sudden emancipation. Both in this State and Louisiana there is an increasing disposition on the part of this people to become *landholders* and *tenants*, and not *hirelings*, seeming to be anxious to rid themselves of all supervision on the part of the white race, and to look upon it as a sort of continued badge, or remembrancer, of their former condition of servitude. Whether this be the result of their loyal league teachings or of a native disposition to avoid all manner of persistent, physical effort, outside that required to eke out a bare subsistence, it is difficult to say; but if the southern landholders are basing their calculations upon the free negro for supplying, in the future, a sufficiency of labor to cultivate their plantations, they are cherishing a fatal delusion. The consequence will be that, in no long time, these thriftless blacks will become the cotton growers of the South, leaving the planter no alter-

native but to sell or rent his land to them; and Mr. D., with all his skill, backed by his rich Peruvian bank, will find that his present laborers will remain with him no longer than they can accumulate enough to purchase a mule, a cow, and a pig. With this modest capital in hand, they will apply to Mr. D. to sell or rent them land, and he can't refuse to do the one or the other without sinking his capital. Yet, in the very teeth of these obstinate facts, Mr. D. asks the question, "Do we want more labor, and for what?" Yes, sir, we do want a good deal more labor, and for all the various purposes that the multiplied activities of an industrious and enterprising population can call for. And even though our railroad and manufacturing companies, our ship builders, and our public carriers, should have no need for additional laborers, yet Mr. D. will soon find himself to be one of the first to stand in need of the very labor, and will bid as high for it as any one.

Mr. D. propounds in rapid succession a number of economical questions, which it would be impossible to answer in a brief paper like this, but will speak to such as present the most salient points. He asks, "Can we make more money by doubling the quantity of labor than we can out of what we now have?" Political economists lay it down as one of the fundamental doctrines of public economy that *population* is the prime element in the wealth of great States; and as their populations are increased, just in that proportion are multiplied the wants that stimulate and reward the various active industries that supply them; and that wages rise or fall in proportion as capital becomes fixed or floating. If immigration merely increased the number of producers, while the number of consumers remained fixed, the commodities produced must descend in the scale of values till some great movement of capital (whether by wars or panics, or some gigantic speculations,) disturbed the regular course of trade, and produced competition for the purchase of labor in the other fields of industrial activity.

Mr. D. is a cotton planter, and it is natural that he should view the immigration movement with reference only to that one particular interest, leaving out of view the other great associated interests of the country, which may in the course of time completely overshadow it. But the cotton grower, too, will profit immensely by the introduction of foreign labor, for the reason that he will become a common participator in the *aggregate wealth* which immigration will bring into the country; and the question as to whether it will exercise a depressing influence upon the price of cotton will not admit of discussion, in the face of those facts that surround us on every hand, and calling upon us to unlock with the key of immigration those immense treasures that lie locked up in the bosom of the rich southern deltas. If the cultivation of cotton should prove unprofitable, the southern cotton growers will have to divert their labor to the cultivation of some more profitable staple—that is all. Cotton is not such an important element in our industrial economy as to compel us to risk our welfare upon its fluctuating fortunes. But as long as it is profitable as a crop, let us continue to produce it; but, in Heaven's name, let us turn away from that fatal, selfish, and narrow-minded policy that would persuade us to sacrifice the future prosperity of our country upon the altar of the insatiate and presumptuous little Cotton King.

Mr. D. proceeds: "We want a

scarcity of labor, that there may be a scarcity of cotton and correspondingly good prices." Will Mr. D. inform us if he believes the price of the northern grain crop to be diminished by the annual introduction into those States of from two to three hundred thousand laborers? To the contrary, in the very face of this immense tide of European immigration, the price of northern cereals has been steadily advancing; and Mr. D. will agree that the fact is attributable to the increased consumption which immigration brings, together with the gradual decline in the productiveness of the grain producing soils. The same law will likewise hold good in its application to the rice, cotton, hemp, and sugar crops of the South—immigration increasing the consumers, and our exhaustive system of tillage annually decreasing the productive capacity of our lands, making it impossible for production to keep pace with consumption, which is already largely in excess, and now to be still farther increased by the immense trade that is to be opened with the Asiatic continent. If Mr. D. will look deeper into this immigration question he will find no ground for his theory of over production and consequent low prices to stand upon.

Mr. D. says, again: "I think history teaches that a population with plenty of room and land have more labor to spare for improvements than a dense population. I don't know what history Mr. D. refers to, but it is quite evident that a dense population can furnish more labor to any given enterprise than a sparse; otherwise, America would be sending emigrants to Europe.

Mr. D. asks: "What country has built the same amount of railroads and factories as the United States?" Well said; but *who* built those works? It was done by your foreign *immigrant!* Where the South has furnished one laborer to its public enterprises, Europe has furnished thousands. The same may be said of the North and the West; and it is to this tide of foreign immigration that those flourishing States chiefly owe their immense strides in wealth and political power.

Mr. D. continues: "Do you wish a great increase of money capital, reducing the rate of interest to the standard of Europe?" *Per contra*, Mr. Hume, in his essay on interest, says: "Lowness of interest is generally ascribed to plenty of money; but money, however plentiful, has no other effect than to raise the price of labor. Writers on public economy hold that money is not a representative of value, but is as much a *commodity* as cotton or grain. And if the production of cotton—which is *our* money—is increased by the influx of foreign laborers, it will only increase our money power, and, according to Hume, raise the price of labor, and with it the price of all commodities produced by that labor.

Again, Mr. D. says: "We owe our prosperity at this time entirely to the scarcity of labor." We hold that the present high price of cotton is to be attributed mainly to the immense increased consumption, occasioned by the new and multiplied uses to which cotton has been put, and the failure of foreign countries to produce it in sufficient quantity to make up for the great deficit produced by the war. If Mr. D. will take the trouble to refer to his Cotton Book for 1832, he will find that in the November of that year cotton went up to thirty cents, *gold*. In all candor, we ask Mr. D. if he thinks the high prices of that year was produced by the "*scarcity of labor*." No less labor was employed in the production of cotton that year

than the year previons, when the market stood at nine cents. His labor-scarcity theory, as applied to the price of cotton, has no ground to rest upon. The high price of cotton in that year was owing to the combined effect of two causes. The great Napoleonic wars that had for near a quarter of a century decimated the populations of Europe were over—the art of peace had been resumed, and population, receiving a rapid increment, created an increased demand for cotton goods. Secondly, British spinners, in order to break down the American tariff laws that had been passed to keep British goods out of the American markets, offered speculative prices for cotton in the hope of supplying an increased European demand. But it is with cotton as with all commodities that supply the prime wants of society, if it becomes too dear, men find cheaper substitutes, and wear their old clothes until prices come down.

Mr. D. expresses serious apprehension that if we increase our laboring population we will put ourselves in constant peril of repeated agricultural "strikes." On this head there need be no trouble if he will take the precaution to bind his laborers by written contracts. This will prove an effectual remedy against the "striking" mania.

The labor of the Caucasian is powerless to make the production of cotton and rice and sugar-cane profitable in the South. But the public mind of the South has been recently directed to the great Asiatic plateau, whose dusky millions are even now, with eager feet, hastening to press our inviting shores. But I find myself on the threshold of a great subject, which cannot be discussed in these pages. Suffice it to say, Asia and America will solve the problem of the destiny of the races. The Theban Sphinx has fallen to the earth.

J. Quitman Moore.

Warren County, Miss.

What is a Good Cow?

What we need is a good cow that can eat and digest a deal of food, and then convert it into milk, not into meat or fat. It is by careful attention to and development of some points that the good milker is at last obtained.

1. Health, good constitution or digestive apparatus, for which we require a capacious belly.

2. That the largest possible development of the animal shall be behind, in udder and parts adjacent.

A good cow is likely to be wedge-shaped, of which the head is the smaller end.

Big heads, or horns, or shoulders, are not to be desired, because they have to be nourished by the food. But these are indispensable: a large bag, and hind quarters to support and minister to it. How have they been obtained, and how can they be further perfected? By always breeding from the cow having this development and from the bull descended from such a mother. More and more these perfections will increase as they descend from mother to child, until at last the greatest possible milk producer is reached, if indeed, it be not already. Possibly an individual cow may have reached the limit in this direction; but what we need now is the certainty that every calf will grow to be such a cow. We want not that one, but that every cow shall give thirty quarts in summer and twenty in winter; then we will agree to stop a while. Observe, both parents should have good health, and both should have these posterior developments. By using due care these properties will become so fixed as to

be continued with certainty to their descendants.

So little attention has been given to this matter in this country that our great milk raisers say, "We know nothing of breeds; we prefer the native cow." And what is the "native cow?" As early as 1608, it is supposed, cattle were brought from England into Virginia; in 1624, into New England; in 1625, into New York, from Holland; in 1627, into the Delaware country from Sweden; in 1831, into New Hampshire, etc. All these, coming from various sources, have been mingled in every possible way, and are known here as "natives." They have no distinct peculiarities which they transmit, but in many cases care and climate and good food have produced from them excellent cows; and the "red oxen" of Connecticut are not easily equalled. The vast majority of our cows are of this kind, and are poor; and from these the milk raisers are obliged to select.

The first appearance, to a judge, will convey an impression as to the health or constitution of a cow. He will ask, also, a bony frame, one that does not steal the fat from the milk; he will feel the skin, to find it flexible, and covered with close, softish hair; he will ask for good lung room, capacious belly, a wide rump, and a well-developed bag, covered with soft hair. Extending from this bag forward, he will desire to see prominent the two great veins which lose themselves in the belly; and on the back of the udder he will look for many well-defined branching veins. Then comes Guenon's "milk mirror," which is a broad strip of hair running up from the udder to the vulva, which he considers one thing needful, but which has not, in this country, been found an infallible test, though it is a good one. If, in addition, the cow is gentle and good tempered, you are almost sure of a milk maker. Look for that kind.—*"The Milk Maker," in April Galaxy.*

A Few Words About Horses.

Hay and oats make the best feed for horses that are obliged to work hard and regularly. If the hay is cut fine and the oats bruised or ground, the whole mixed and moistened, the horse will eat his rations quicker, digest them sooner, and thus have more time for resting and renewing his power for labor. Farmers' horses that work little during winter time may be kept cheaper by cutting and mixing bright straw and hay in equal quantities, and adding a ration of steamed potatoes or raw carrots. Colts should be fed liberally on good hay—bright clover is best—and bruised oats; give them a roomy box stall in stormy weather and during nights. Litter freely, and do not let the manure accumulate under them. Saw dust or spent tan makes good and convenient bedding; in cities and villages they are often cheaper than straw. Groom horses well and let them have exercise every day; a run in the yard is excellent. See that stable floors over basements are sound and strong. Arrange the feeding racks so that dust and hay seed will not fall into horses manes or eyes. Some horsemen build their mangers too high, thus forcing the animal to take an unnatural and painful position when eating. Farm horses that are not worked should have their shoes taken off, and those that are driven on the road should be kept well shod.—*American Stock Journal.*

Some persons, instead of "putting off the old man," dress up in a new form.

Frauds in Fertilizers.

CLAKSVILLE, MD., Aug. 23, '69.

Editors Maryland Farmer:

Allow me to commend your article on "Frauds in Fertilizers," in August No. I think it goes over all the ground, and cannot fail to produce excellent results in the discussion of the subject. It is a question which indicates two courses of action—private and State—and that I may not occupy too much space, I will briefly state my views of both, believing that if my views could be complied with, we should hear no more of farmers being deceived by frauds in fertilizers. First, private action. Let the farmers in each county meet together, by organization, and select *one of their number* to act as their agent in the purchase of fertilizers, requiring heavy bonds of him for the faithful discharge of his duty, and purchasing their fertilizers only from him. This agent would then be able to make such terms with manufacturers as would secure to his customers *always* a pure article, without extra cost to them (as they would purchase at manufacturers' prices), and protect himself against loss by the sale of an adulterated article. By visitation analysis, in fact, constant vigilance, this agent would have no difficulty in fully protecting himself and customers. In purchasing manures at all times, farmers should *always* reserve a quantity (several quarts) from different parts of the purchase, which should be sealed and placed carefully away, unused, and if the results of application are not satisfactory, the sample should be analyzed and action taken according thereto. Only a few grains are used in an analysis, but more than enough should be saved as a sample. I should have introduced these remarks by saying, as the first step, buy only of responsible parties, otherwise there is no redress. Second, State action. If every manufacturer who sells his article without the limits of the State was compelled to deposit with the State Commissioner a certain amount of securities for his good faith, with a sample and analysis of his article, it would operate as a preventive of fraud to a certain extent. Without this safeguard we do not see how an analytical label would be a protection, as false samples could be issued and false labels affixed to fraudulent packages.

In regard to sending samples of manures to the Department of Agriculture, it seemed a natural resort to solve a problem, but to all who sent there to inquire for truth (several samples have been sent), the answer has been, "It is not within the province of the Department to analyze artificial manures for individuals."

It is not often we can complain of Colonel Capron's decisions, but in this case we concur with you in your remarks, and request a reconsideration of this decision, and suggest the wisdom of giving an impartial analysis to see what few names would be sent for the specific purpose of ascertaining their character, by those directly interested or engaged in agriculture. Perhaps the Commissioner feared that manufacturers would make use of the time of the Department, if so the privilege could be modified by certain restrictions to prevent its abuse.

D. L.

Next to the devout exercises of religion, perhaps nothing will more completely remove sadness and disquietude than the silent eloquence of flowers, and the vocal music of birds.

Commercial Fertilizers.

The Secretary of the Connecticut Board of Agriculture procured last winter samples of sixteen articles known in commerce as "fertilizers," and submitted them to Professor S. W. Johnson, of Yale College, the well known agricultural chemist, for analyses. They were received, and without names or labels, with the exception of numbers, by which to identify them, were submitted to Professor Johnson, by Mr. Gold, Secretary of the Board. Upon receiving the results of these analyses, the Secretary added to each its name and price, and has published the whole for the benefit of farmers.

The report shows also, how much it would cost to buy, in other forms the materials which give these fertilizers their value. Thus the farmer has before him all the information needed to choose the cheapest materials for his purposes, whether it be a patented or proprietary compound, or a mixture of his own manufacture.

These analyses proved that in every instance most of the substance consisted of water or sand or carbonate or sulphate of lime, or some other material of little value.—These materials were mixed with phosphates and nitrogenous matters in very different proportions; but the really valuable component parts are but a small proportion of the whole. Prof. Johnson reported that there was good reason to suppose that some of the articles sold as fertilizers, and for which high prices were paid, were the products of deliberate fraud; their value to the farmer being in strange contrast with the price at which they are offered and advertised.

The sample which proved the best of all is sold at $56 per ton, and contains actual fertilizing ingredients which it would cost the farmer $47.32 in gold, or more than $60 in currency, to buy separately in any common form. Next to this comes one, the useful parts of a ton of which are reckoned to be worth $32.09 in gold, and which is sold at $65 in currency. On the other hand, a popular article, sold at $28 per ton, is estimated to be really worth as a fertilizer, not more than $2.33 per ton in gold, or but one-ninth of its price; and many other favorite articles of this class seem to deserve their reputation but little better, if the samples obtained by Mr. Gold and tested by Prof. Johnson were fair specimens.

It is not to be supposed that swindling in fertilizers is confined to New England. Indeed, we question whether this business of swindling is carried on to a greater extent in any other State in the Union than in the State of New York.

The above statements point more strongly than ever to the necessity which we have so long and so persistently urged, of some action on the part of our State authorities, for the protection of farmers in the purchase of fertilizers. We trust that the next Legislature will take action upon the subject, and make the penalty for this kind of rascality sufficent to check, if not prevent it.—*N. Y. Exchange.*

The Driven Well

IS IT A NEW INVENTION?

EDITORS COUNTRY GENTLEMAN—In the late numbers of your journal attention has often been called to the so-called "American Driven Well." As I view the matter, this is but the concentric idea of former minds, or, in other words, is but the mechanical, not inventive, application of skill to old inventions. In the first place is the old Artesian

French Well. This is universally understood, and consisted in appliances by which a rope, to which various tools were attached, was used in the well. There was fastened to the end a rod with chisels, hammers, clutches, &c.; the pipe was of iron and driven as the well was sunk. In a late patent it is made a point of claim that "the earth is not taken out" in the so-claimed new well; but in hundreds of cases that was the case in the old French wells, years ago, for in soft ground the tube was started, and a solid iron rod punched out below the earth; so that the recent patent claim was exactly met; no earth, rock or sand or other material was removed upwards, but, as in the American Driven Well, was all of it forced sidewise out of the way of the point of the well. Our old well-digger here, Mr. Lawton, often sunk wells thus at this place years ago.

The next modification of the tube well was as in the case of the salt wells at Syracuse. There was, near the Onondaga Lake, a soft mud and marsh of more than 100 feet, and a gravel in which the salt water is found. To reach this, as I saw in 1840 to 1847, a piece of cast iron about six feet long, both with and without side holes, was made, and a hole four to six inches in diameter in the center. This cast iron point was fastened to a wooden log ten or more feet long, and passed down in the mud near the lake. Then to this log, joining like the common aqueduct log, everywhere in use, the second log was secured, and so on a third and fourth and more logs, as one after the other they were sunk to the salt water. A shed with earth and stones to weight the part of the logs and of the ground so as to sink the log tube was used.—Here is truly, in 1840 to 1847, the American Driven Well, for it had a point, a tube sunk without the removal of the earth upwards, holes near the point, and what is singular the tube itself was used as the pipe of the pump, for the line of logs, nearly or quite a quarter of a mile long to the Salina pump-house, was attached to the top of the tube, and drew the water that distance; that is, drew the water up one hundred and sixty or eighty feet, thence along the level many rods to the pump-house, and up to the great cylinder worked by the canal water wheel, and forced it, a boiling stream, to the top of the tanks; whence a similar line of logs conveyed it to the fires that boiled the water. There were wells over twenty years ago, seen by tens of thousands of our citizens, with every principle or device of the American Driven Well that inventive skill can name. The substitution of one material, gas-pipe, is not invention but the choice of a mechanic, artist or engineer.

But it may be asked, was the iron pipe or point of the salt wells ever perfectly closed, when the well was sunk by the pressure of the stones on the logs? I reply, yes; for in 1846 or 1847, while at the Salina pump-house with the State Superintendent of the works, I was introduced to one of the workmen who helped drive the two wells then in use near the lake shore, between Salina and Geddes. He walked with me down to them. There was the shed and tall tower over one of the wells, the pile of stones to sink the tube, and the other appliances in part. This workman said that in sinking the second well a wooden plug was driven in the cast-iron pipe, which weighed several hundred pounds, and the well sunk to near the salt water by the pressure of the stones that lay near by—the

tube being dry and clear over 100 or 150 feet, when a heavy bar on the end of a rope was let down and the plug driven out. The tube was thus cleared at the point after being sunk.

Farther come in lesser facts, as the driving of two or three old gun-barrels into the ground in 1830 or 1831, for a well. In 1860 or 1861, about the time of the fall of Fort Sumter, I bought of the railroad repair shop in this place two old burnt tubes or flues of a locomotive. These I had welded—somewhat imperfectly—into a tube about 16 or 18 feet long. I then borrowed of Mr. Hunter an augur, made of a common wood augur welded on a handle of iron about ten or twelve feet long. Mr. Hunter's use of this was to aid him in the digging of shallow wells in the flats of this place. He, by a wood handle, turned this augur down, and if he struck a layer of gravel he knew there was plenty of water—at the six, eight, ten feet, where the augur felt the gravel. My argument was that, if the augur would go down, a pipe would if not too large. So I removed a foot or two of the hard clayey earth, by a new house I was building, ran down the augur a few feet without removing the earth, then put in my pipe, with a wood point in its lower end, and with an axe drove it to where it now stands. By a rod of iron I knocked out the wood point, and put in my pump.—Thus at about two dollars and a half expense, and not over an hour's time, I had a driven well. Just as I began to pump, a stranger, who stood with the few looking on, said that he was from Homer or Cortland, (I have forgotten which,) that he liked to see new things, and that was a quick way to get a well, and asked me particularly all about it. He went away after seeing all I had done. I reflected: in the salt wells the principles of driving, the point and all, are anticipated; I cannot get a patent on what is at least twenty years old. Many said, apply for a patent—you have a fine thing; but I never could see a point on which to hinge a patent, in view of that Onondaga salt well which I saw in 1846 or 1847.

About a year after this Cortland county man saw my well, I heard that a driven well was invented at Cortland, N. Y. I am aware, somewhat, of the attempts to establish by oaths early dates at Cortland, N. Y. Nevertheless, it is my private opinion that, had that Cortland county man not happened to pass by and see my well, the world had never known of the so-called "American Driven Well," as it now knows of it. And it is my opinion that, had the Patent Office known as much of the Syracuse and Salina salt wells as I knew, the Patent Office never would have granted any patent by which any one man could claim royalty for so common and such an old device.

For years, whether I am correct or not, I have wished to say thus much to the public. Your articles in the *Country Gentleman* have called out this statement; and I wish the world to know that I drove with my own hands one of these wells at a day, as I believe, anterior to any patent claimant, and that I did not apply—though familiar with the Patent Office—for a patent, because I conscientiously believed I could not swear that I was an inventor of what I knew, in every point of invention, was in the salt wells of Onondaga county long before me. S. J. PARKER, M. D.,
Tompkins Co., N. Y.

Hell is like to be full of good wishes, but heaven full of good works.

Perseverance in Farming.

"There are many farmers who do not stick to one thing long enough to make it pay, and consequently they lose in everything. At one time they conclude to devote themselves to stock-raising. Before they get fairly under headway in this, they change their minds and go back to raising grain. Some again make a specialty for a time of a certain crop, wheat, corn, or potatoes, for instance. While they are following this specialty, the crops may be small and the prices low, and they turn to another just in time to miss large crops and good prices in what they have left. The best farmers we have observed are those who find out what their soils are best adapted to produce. They then turn their energies in that direction, and go straight forward on that line. A poor crop does not discourage them. They go on, and are sure to be finally successful. To illustrate our idea: We once knew a farmer who always made it a point to fatten from twenty-five to thirty hogs every year. Let the price of pork be high or low, he every year had his lot of hogs, about the usual number. He took great pride in having the best in the neighborhood. Some years, perhaps, he might have done better by selling his corn instead of feeding it. Some years, perhaps, he might have done better by turning his whole attention to some other specialty in farming. But we always noticed this, that, taking one year with another, for a long time, say ten years, he made the hogs pay. He was a successful farmer. Another farmer, near by, every year planted potatoes. Sometimes his crop would fail, and sometimes when he had a good crop the prices would be low. But he kept straight forward.—Every spring he planted potatoes. The result in that case was the same as in the other. Taking one year with another, with a considerable number of years, he made the potato crop pay. He, too, was a successful farmer. The farmer who would make his business pay must have a policy, and must adhere to it." *American Farmer's Magazine.*

The following curious letter was received by the Executive Committee and read before the N. C. Agricultural Society, at one of their meetings during Fair week:

I am King of all Grapes in America, I enjoy splendid health. Never am I bothered with any disease, as mildew or rotten spots. I can stand any kind of weather; all that I need is, to raise me good, nurse we good and give me plenty to eat, and I will bring you, every year, fine and plenty grapes which are good to eat, and which makes a fine wine. Look around me and see all those bottles and jars, filled with fine wines, pickles, preserves, jellies and syrups, all made from me.

Raise me in dry soils, and I will fill your pocket-books; drink my wine freely and it will make you lively, happy, industrious, and a good people; but for God's sake, don't drink any more of that *stuff* they call "liquor." It puts the devil in you and leads you into mischief and crime. I like the people, the soil and the climate of the "sunny South," especially of the "Good Old North State," but I don't like to live on the other side of Mason and Dixon's line; the people and country there are too chilly for me.

Your True Friend,

CAROLINE SCUPPERNONG.

The letter is supposed to have been written from the centre of the flourishing young Vineyard of Mr. Louis Frœlich, near Kenansville. Duplin county in this State.

Loss by Insect Depredations.

The American Entomologist asserts that one year with another the United States suffer a loss, from the depredations of the insect tribes, to the amount of $300,000,000 annually. This seems an enormous amount, but when we consider the number of enemies which vegetation has in the bug or insect family and the rapidity with which each saps the life of a plant or the fruit which it produces, the sum, large as it is, will not be deemed an extravagant one. Alluding to these insect depredators, the Entomologist says: "Turn them which way they will, the agriculturists and horticulturists of the Northern States are met by plant lice, bark lice, May bugs, rose bugs, weevils, cut worms, caterpillars, palmer worms, canker worms, slug worms and leaf rollers; and at periodic intervals the army worm marches over their fields like a destroying pestilence; while in Kansas, Nebraska and Minnesota, and the more westerly parts of Missouri and Iowa, the hateful grasshopper, in particular seasons, swoops down with the western breeze in devouring swarms from the Rocky Mountains, and, like its close ally, the locust of Scripture and of modern Europe, devours every green thing from off the face of the earth."

The Southern States, though exempt from the ravages of many insects peculiar to the Eastern, Central and Western States, are subjected to great losses from the cotton worm—a scourge which often sweeps off one-third or more of the entire crop.

Many men take a great deal more pains for this world than heaven would cost them; and when they have it, do not know how to live to enjoy it.

Staggers in the Horse.—Some time since I had a case of this disease upon my premises; it was what is termed the sleepy staggers. The animal was dull and stood much of the time with his head nearly resting on the ground. I applied to a horse doctor; he attended him for some time, and finally pronounced him incurable at that season of the year, which was winter. As the horse was worthless in that condition, and having no appetite to eat, I concluded he would be a good subject to experiment on. I procured one ounce of calomel, which I made into four pills by adding a little flour and water. These were given one a day. Afterward I drenched him with aloes dissolved in alcohol, and in a few days I saw a change for the better. I then gave him the third ounce of calomel, following with the aloes, to keep his bowels open. During this treatment I fed him no grain; corrots and hay constituted his feed; and I am proud to say I made a sound horse of him, and he now works every day.—*Cor. Ger. Tel.*

Look to Your Horse Collars. The collar is too often quite unfit for the horse. It should not be too big or two small, and should be well padded and have a smooth plain surface. Very many horses are now drawing heavy loads, who have bleeding and running sores under their collars and saddles.

There will come a time when three words uttered with charity and meekness, shall receive a far more blessed reward than three thousand volumes written with disdainful sharpness of wit. But the manner of men's writing must not alienate our hearts from the truth, if it appear they have the truth.

Farm Implements and Machinery.

This is the age of machinery.—Into all branches of human industry, however subtle or however coarse, machinery is thrusting its Briarean hands—from the enormous trip hammer, with its force so nicely adjusted that it can be brought down with a blow equal to the strength of fifty giants, or so gently as scarcely to crack the shell of a walnut, to the sewing machine that is capable of doing the work of the delicatest fingers—all is changed from what it was less than fifty years ago. In every mechanical pursuit improved devices have economized labor, and scarcely less has this become apparent of late years in all matters relating to agriculture. The reaper no longer grasps his grain by the handful to cut it with the crooked sickle. The scythe has yielded in the grain field to the cradle, and the cradle to the mowing machine. Improved rakes drawn by horse power have largely superseded the hand rake. The flail has given place to the threshing machine, straw cutters of every imaginable device to the lumbering old fashioned affair that once went by that name, whilst fans in combination with threshing machines separate the grain from the straw, clean it thoroughly of wild seeds and put it into bags ready for market. We have apple parers, and sausage cutters and stuffers and household looms and patent churns, and even machines for milking cows. The poetry of farming is vanishing, and every department of rural industry is taking a practical and prosaic form. It is one of the necessities of the epoch in which we live that every thing shall be driven at railroad speed, and that in all we do we shall condense into a few minutes what it formerly required hours to accomplish. Nature alone follows the ancient laws. The seasons cannot be hurried or anticipated—except under glass—but pursue with unvarying regularity the same unvarying round. With man and man's works it is altogether different. Whatever his new needs may be new inventions rise up to meet them. Machinery now does at small cost the work of myriads of hands, and thus cheapens production and adds to the comfort of the population.

That man in farming is behind the age who does not avail himself, to the utmost of his means, of the labor saving machinery which the ingenuity of inventors has placed at his command. To do that by sheer force of manual labor which can be done by machinery so much cheaper, and so much better, is to waste money and expend strength uselessly. It is to work at a loss while others more quick-sighted are working at a profit. It is to reject the good gifts of human skill, and to go plodding along in the old time-honored, but now almost obsolete, fashion. A man might just as well prefer to stick to the old Conestoga wagon in carrying his produce to market when a railway passes close to his door, as to cling persistently to the old hand implement industry in preference to inventions that utilize and economize human labor.

We hold it to be self-evident that he who uses the best tools will do the best work; will do it quicker also, and will save himself much vexation of spirit, much time otherwise wasted, much expenditure of muscle, and, in the end, no small amount of money.

High farming will pay even with us; that has been demonstrated.—Mr. Mechi, in England, has shown how the most intractable soil may be made to produce immense crops, and in spite of the great outlay

required to bring it under subjection, will return annually large profits. Mr. Smith, of Lois Weedon, has also practically demonstrated that land deeply ploughed and subsoiled, or trenched by hand when labor is cheap, will produce forty bushels of wheat to the acre when seeded in alternate strips; one strip in crop and one in fallow. Coming down to the present time, there has been produced in Texas this season "a brag acre" of cotton, which credible witnesses testify will certainly yield five bales to the acre, and perhaps seven—the usual product of an acre being one bale.

But the great want of our country is in trustworthy field hands. Those who were once held to service and labor throughout Maryland and her sister Southern States are no longer to be depended on. The tendency of this class, as indeed it is of many of the white population also, is towards the large cities. These are filling up at the expense of the rural districts, and the day appears now far distant when the supply of field labor will be found adequate to the demand. It is the great and ever pressing trouble of the farmer. Immigration may do something to relieve him, and in the course of years, when the new States of the West no longer offer to settlers the attractions of a virgin soil and a growing neighborhood, it is quite possible that the inflowing wave of population from abroad will spread over the older States, and slowly but surely restore, to perhaps more than their original fertility, those soils which under long cultivation have become partially exhausted.

In the meantime, however, what can our farmers do? That is the question. They need help in the busy season, and that help is not to be had except at a cost in wages which absorbs the greater portion of the profit of the crops. The best means open to him is to reduce the area of cultivation within the limit of his capacity to manage well, to bring that portion of his land into a condition of the highest fertility, and to supplement the smaller force of field hands he will thus require with such implements and machinery as will in the one case expedite labor, and in the other supersede it for certain purposes almost entirely.

Distinguished Agriculturists. Among the Romans agriculture was held in the greatest esteem. Cato in the second, and Varro in the first century, previous to the Christian era; Vorgel, at the time of the birth of our Saviour; Palladius, Pliny and Columella have all extolled its excellencies. Several of the noblest families of Rome derived their patronymics from some vegetable which they were famous for raising, such as Fabii pea, Lentuli, Cicerones, &c. These were the days of Roman agricultural glory. Cato says that when they praised a good man they called him an agriculturist and a husbandman, and it was considered a great honor to be thus spoken of. Cincinnatus, who flourished four hundred and sixty years before Christ, was the ploughman of his own four acres, and when the Sammite Ambassadors visited Curtius Dentatus, they found him at work with his vegetables. Cato says, "Study to have a large dunghill," and to this I would add, treat your dumb laborers as inferior brothers, deprived of speech.—*Henry Berg.*

Dr. Holland says fruit trees in Switzerland are entirely exempt from the ravages of insects, and accounts for the fact by the great abundance of sparrows.

The English Sparrow.

Is the sparrow the gardener's friend or foe? This is a question which has often been discussed, and the verdict has almost invariably been in favor of the sparrow. In the face of all evidence, however, there is a popular prejudice against this little bird, the reason probably being that he boldly commits his crimes before our eyes, while his good deeds, which far outweigh his trivial delinquencies, are done by stealth. Our friends in Australia were unhappy until they could get sparrows from home, and now, after having them less than 4 years, they begin to think all manner of evil regarding them. Edward Wilson, whose labors in the department of acclimatization are universally recognized, and to whom, if I mistake not Australia owes its sparrows, has been asked to produce authentic information as to the balance of its merits and demerits. He has done so; and he has recently communicated the result in one of the daily papers. He has ascertained that no less than 1,400 cockchafers' wings have been found below the nest of one pair of sparrows. Each female insect produces about 40 grubs, which burrow for 3 years in the ground, preying upon the crops during this time to an enormous extent. As many as 100,000 of these grubs have been found on one acre of land, and as each acre will grow about 40,000 mangolds or turnips, there are about three grubs to each root! In some years the damage done by this single insect in France alone has been estimated at the astounding sum of 40 millions sterling! A very simple calculation shows that simply in feeding their young, a pair of sparrows annually prevent the production of 14,000 grubs; and the account in favor of the birds is not yet complete, for

When e'er they take their walks abroad
How many grubs they see,

and no doubt dispose of, (to say nothing of insects,) without leaving any record of their good deeds; for sparrows by no means restrict themselves to cockchafers, even when these delicacies are in season, but will eat almost any kind of insect or grub that comes in their way. Wood, in his illustrated Natural History, 1862, states that a single pair of these birds were once watched for a day, and were seen to carry their young no less than 40 grubs per hour. Such labors as these are not to be disregarded. Let a somewhat stout farmer, especially if he be dressed in the orthodox style of top boots and rather tight clothing about the girths, attempt to bring home 40 grubs an hour, and we are much mistaken if at the end of that time he does not feel a greater respect for the sparrow, and I think that their labor, which he can now better appreciate, in destroying his natural enemies, fully entitle them to the seeds and fruit to which they occasionally help themselves. Let our Australian friends accept Wilson's conclusions without hesitation. Wherever the sparrows and other small birds have been exterminated, the crops have been destroyed by the consequent increase of insects, and in several cases the same governments which ordered the destruction of birds have been compelled to revoke their law and issue orders for their protection. The balance of Nature cannot be rashly interfered with by blind mortals without evil consequences.—*British Magazine.*

A Christian congregation calling upon God, with one heart and one voice, and in one revered and humble posture, looks as beautiful as "Jerusalem, which is at peace with itself."

The Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S DANCY, } - - - Editors and Proprietors.
WM. BIGGS, - - - Business Editor.

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Labor.

The farmers in every direction are debating the subject of more and better laborers.

That this country requires more reliable laborers is unquestionably true, as none will doubt who desires its prosperity, by a development of its agricultural, manufacturing, mineral and mechanical resources.

How is this great object to be accomplished? This question is answered by the importation of Immigrants from the old World. Are not a large portion of our freedmen who were once good laborers now dishonestly living in idleness?

If we cannot bring those who were in days past reliable hands into some regular employment for an honest livelihood, is it reasonable to suppose that the Chinaman will be a reliable laborer under our present disorganized system?

Are the freedmen to blame for the present derangement in our system of labor? In answer we will here make a short quotation from a communication of ours to the Tarboro' *Southerner*, Dec. 28th, 1868.

We intend no offense when we affirm, (all things considered,) that the employers in this country are more to blame for all the meanness committed, than the freedman.

We are bound to admit that if we had a well regulated system of labor we should not have so many in our midst consuming and not producing, consequently there would not be half the depredations upon our barns, stock, &c.

Who is to blame for this disorganized condition of labor? We positively assert the employers are the chief cause, and not the freedmen. If we do not change from this course we cannot expect to prosper, but instead society will grow worse and worse until this country will become lost to all sense of virtue and justice.

How is this change to be effected? By organization. If the employers will hold meetings and adopt something like the following resolutions, and adhere to them the change will be effected:

Resolved, 1st. That we, the employers will leave off our indolent habits and attend strictly to our business in person.

Resolved, 2d. That we will neither employ nor allow any one to live on our premises who will not engage as a regular laborer, and that we will not hire any one during the year, after a reasonable time is allowed at the close of each year to change homes, who cannot show some good reason for being out of employment.

Resolved, 3d. That those who farm on shares shall labor regularly for the well being of the farm, and shall be compelled to perform their duty as fully as if employed on wages.

Resolved, Lastly, That every employer will respect colored men as freedmen and comply strictly with their contract; requiring the same from those employed, and if they fail to comply, turn them off.

Suppose you had adopted and adhered, at the close of the war, to the first resolution given above, would not your condition have been greatly benefitted? Every person who had a sufficiency of reliable laborers at the commencement of the war, must know if they had changed their former habits after emancipation, and gone on their farms, and attended strictly to their business, their condition would have been greatly benefitted.

Had you adopted the 2d, 3d and last resolutions at the close of the war, you would have had twice as many cattle and hogs as you now have, and also a large increase of the varied products of the farm, and your farms would be worth at least twenty-five per cent more than at present.

Besides this, we should not have this army of loafers that now live in every direction, but we should have had ere this time, comparatively speaking, a contented set of laborers; for they would have learned by this time, that after violating their contracts or offering willful insult to their employers, they could not so easily get employment at your neighbor's.

It would not be overestimating the number when we say one-third of the negroes that are able to labor, are not earning the bread they eat to say nothing of their clothes and bacon.

Are they to be allowed to roam over the country and live on the labor of honest men, or shall they be taught they must "eat bread by the sweat of the face," or with us they cannot have an abiding place? We say, by an associated effort they can be brought to labor for an honest livelihood.

It is held by many that the transition of the negro from slavery to freedom, to vote and legislate in his state of ignorance without any qualification is so great that he never will be a reliable laborer.

We give it as our honest opinion that this generation of negroes are the best laborers we can have if we will but do as above directed; but if we allow them to live on our farms and do as they please, as is often the

case, the rising generation will be the greatest plague and curse any any nation ever had to contend with.

Our reason for this is, the negro is ignorant, naturally barbarous, and thievish. We know the negro and give it as our opinion, that if this Southern country was left entirely in their charge, with a sufficiency of stock, implements and rations for one year, they would descend into barbarism, and within two years the civilized world would be shocked at their wretched condition. With this race we are to live notwithstanding his progenitors taught him to take every advantage of his master, (in many instances from necessity,) which he still holds to, and far worse, the fathers and mothers are now teaching the children in these vices that they were brought up in.

It seems to be a part of their nature to steal from, and lie to the white man; they look upon it as nothing but right to take what their employer has, and then prove by false swearing each other clear of it.

The view they take of it is, they were held as slaves wrongfully, and that what the white man has, he acquired by his (the negro's) labor, consequently it is not religiously wrong for him to steal it from him. We wish it to be understood that there are many honorable exceptions to this; but in every instance the mass of negroes discountenance them, for no other cause but their integrity.

At the close of the war we felt it to be our duty, as we now do, (if it could be done,) to assist in raising the negro from the degrading influences of his slavish habits, thereupon we established a freedman's school on our farm, which has been in operation over two years, and we regret to state what experience has demonstrated to us, that he is incapacitated to be benefited by the influences of education.

We are satisfied his race is the very lowest of the human family and that to endeavor to cultivate their minds will only prove as a means of becoming more consumate adepts in their various habits of meanness.

At school the teacher learns them to read and write, and at home their parents teach them all the vices they possess.

You may suppose from what we have here said, that we could not have the negro to labor for us or to live with us.

If you get Immigrants from the Eastern world, after trying them you will learn what you ought to know now from experience, that all men, with but few exceptions, who hire for wages, will take advantage of their employer.

To succeed, there must be some method of coercion, as well as to give diligent attention and see that they do their duty.

The difference between the negro and immigrant is this, the immigrant possesses more manly independence, is less barbarous, does not steal and lie as the negro, but as a laborer for the cotton, sugar and rice fields, the negro laborers, who work from the force of habit, are the best, since they are acclimated and understand the cultivation, and being

"naturally pliable" and having been taught to work while slaves, are more easily controlled.

But their children's place must be supplied by other laborers, for as we have said before, the manner in which they are being raised will make them the most contemptible set of vagabonds that ever lived.

The number of laborers of this race are daily decreasing and their places must be supplied.

The question naturally arises, which is the best and what nation of people should be introduced to fill their place? We hold that in introducing laborers here that it will be best for our posterity and the country that we have people that are honest, frugal and that will harmonize with us, not only in a social point of view, but in a good political government.

We should say it would be best to get the European and make him a tenant at first, for this will cause him to be more interested than if employed as a regular laborer on wages.

It is not reasonable to suppose the Europeans, possessing the intelligence they do, will work on Southern fields on an equality with, and have the negro in competition for wages, when there is such a large area of the Western domain remaining untilled.

We give it as our opinion that we shall not be able to get this class of immigrants so long as the negro predominates to the extent he does in the South. But if you intend to cultivate large farms as in the past, by employing hands for wages, it would be best to get them from countries having as near the same climate and productions as ours as is possible, and a people less intelligent than the people above named.

The Chinaman, perhaps, would be the man as you might get from Asia; such would come nearer answering the purpose than any other.

Some may object to importing them here, on the ground that they are heathens in religion, and that if allowed political privileges, their notions of political government being so unlike ours, they might prove more a curse than a blessing.

Laborers we must have, and can we get a more blasphemous race or any who know or care less for political economy than the negro? If so, the sooner the consummation of the world the better it will be for us.

It is to be hoped, no Religionists, who believe in sending the Gospel to the Heathens, will object, but, on the contrary, ought to contribute their might towards bringing them to this country, where they might administer the Gospel to them more effectually.

It is also to be hoped, that if he is entitled to the elective franchise, as he ought to be in this country of universal suffrage, that he will have enough intelligence not to follow the teachings of those who will lead him to ruin his own and injure the prospects of his employer.

The Chinaman or somebody else is coming very soon in great numbers without a doubt, unless the great number of idling negroes are

brought to some regular employment.

Employers, many of you will agree with us in the above sentiments, but every one will endeavor to excuse himself by saying, "I can't do anything by myself to produce the change."

Let us advise you to counsel with your friends and urge them to an associated effort.

Professional men, you too, with your theory and eloquence must help to convince our countrymen that this demoralization must cease or not only our agricultural interest will be lost but also our "virtue, justice and all the noble principles of our nature."

Freedmen, all of you who feel an interest in your own race, we call upon to assist in establishing this great change, which will add two fold more to your own interest than ours.

Inasmuch as you claim to have been brought out of that which was equal to Egyptian bondage, let us admonish you to leave your mean slavish habits in Egypt and learn to cultivate the habit of honesty, perseverance and prudence, and if you cannot do this, your race is doomed on this continent, for others will take your place as sure as day follows night.

Will you continue to distrust your former masters and act the same part towards them in the future that you have since your emancipation?

While we have good reasons for believing some of our race are not willing to mete justice to your race, would not three-fourths of your own race destroy the remaining fourth by the course they are pursuing, if it was'nt for the white race? Do you expect (that which does not exist) every white man to do right, while the majority of your race do wrong?

Will you believe us when we tell you, we know very well that many of the white men whom you mistrust are your best friends and will give you justice in all things.

Employers, will you change or not? If so, be up and moving.

To the Farmers of Edgecombe.

The farmers of this county are undoubtedly equal, if not superior, in every respect, except one, to any county in this State.

Go over Edgecombe county, at any period of the year, from centre to circumference, and you will find them busily engaged at the various improvements that are essential to good crops.

After the crop is laid by, from then until housing time, and after the crop is housed, one might expect to find them less disposed to work ahead; but such is not the case, for they are busily engaged at these intervals in preparing for the coming crop. You will find them repairing ditches, digging marl and raking up material for compost, hauling vegetable mould into the stock-lots and in the fields for compost, clearing lands, &c. In consequence of this, by the coming crop they have, by their continued perseverance, succeeded in making a large quantity of compost.

But, at the same time, they are wanting in that public spirit which is essentially necessary to make us what we justly deserve to be—not only the best county of farmers, but possessing as much public enterprise as any other county.

Why tax our bodies and wear our muscles out to produce such a large amount to be expended in such a manner as to be lost to the county? Why is it we have never even had a foundry in this county to manufacture our castings, and by that means save the thousands of dollars that have been annually sent away for these articles of prime necessity?

All must admit that the many thousands of dollars that are annually sent North for carriages, buggies, wagons, cart-wheels, tubs, buckets, &c., &c., could be manufactured as cheap here as at the North, by the establishment of the proper machinery. Labor is as cheap here as at the North, and we have a forest abounding with all the necessary timber.

It cannot be possible for a New Yorker to purchase his timber from other States, pay freight on it, then manufacture it up, charge a profit on it, send it to the South with an additional freight, and undersell us.

Why should Edgecombe spend annually that which is equivalent to the interest on over half a million of dollars for the education of her daughters, to say nothing of her sons, at college out of the county?

By spending one-fourth the amount we pay interest on, we can have manufactories and institutions of learning at home equal to any to be found.

Some may enquire, how is this to be done? By associated effort.—There are many machine shops that might be put up by individual enterprise that would answer in the manufacture of many articles.

But as for the college, it would be necessary for the farmer and all professions to co-operate and build by joint stock. They might build an institution upon this order, which would not only have the effect to produce a good dividend, but would keep our money at home, besides it would have the effect to bring together the many daughters of Edgecombe, under her own roof, that are now at the many institutions abroad.

We know it is said that people like to send their children from home to school for the name. This may be true, in some instances, that people go for show without being benefited for the cost. We also know it is held by many that it is necessary for us to send our children up the country that they may have good health.

When our children are constitutionally diseased, perhaps it would be best to send them off, but why should we send those who are healthy off to become acclimated in a different climate and afterwards return to live.

We are nearly one hundred miles from the sea shore, which is as far off as the Colleges at Goldsboro,' Wilson or Murfreesboro'. Goldsboro' and Wilson were both in flourishing

conditions previous to the war and Murfreesboro' is now in a prosperous condition.

Let but one sentiment exist, and that is, lay the corner-stone at an early day and build thereon an institution second to none, in as pretty a site as there is in North Carolina, in the commons of Tarboro'.

Let us no longer separate our daughters as at present, for many of them are now almost entire strangers to each other when they return from school; by bringing them together they will form that association which will work for the good of society in a social point.

Such an Institution would be an ornament and an honor as well as a lasting benefit to our children.

We hope the people of Edgecombe will consider these questions in their proper light and not say this all looks very well upon paper, but we intend to pursue the same course, for by so doing we can make more net money.

Whether you agree with us or not it is quite certain that many articles of farm and household necessity will be manufactured in this county and country, and Institutions of learning will be established in many sections where there are none, in a short time.

In days past we invested our capital in the negro, but now we must turn our attention towards investing our money, not in lands entirely, but in every branch of industry by which a profit can be derived.

All that is needful with our people now, is confidence, one with another. Since the war has demoralized them they are unwilling to invest their money or loan it to any person except such as have a sufficiency and do not want it.

Let us have a wise and economical government, then the most skeptical, who distrust almost every body will be surprised at the progress we will make in a few years.

Manufactories will go up in many sections where they are not thought of at present. Prosperity will have then commenced in reality and not until then.

Millions of dollars that are annually sent North for certain articles, will be retained at home, and in less than ten years capital will accumulate in such a large amount that you will not hear our people calling in vain, as they now do, for Northern capitalist to assist in building up.

Then the monarch of American commerce, cotton, will not be wielded to build up Northern capitalists, as in the past, at the expense of Southern planters, but upon our own ships, and from our own ports, from Morehead city and Wilmington, will be exported to all parts, our cotton, tobacco, rice, sugar, &c.

As it now is, we pay ten dollars per bale freight, and other expenses to factors when we send to New York, which amount would take it direct to Europe, consequently Edgecombe, on her 15,000 bales of cotton, (to say nothing of North Carolina and the other Southern States,) would save by this not less than $150,000 annually.

Then our merchants could pur-

chase their supply of goods upon Southern soil on as good or better terms as in New York, because, while we are exporting, as a matter of course, we can be importing all articles that are not manufactured at home.

The State will become a net work of Railroads, all paying a handsome dividend. Institutions of learning will go up in addition to these we have at present, and all will be patronized. Our mineral resources will be developed. We shall no longer burn Northern coal or eat their butter and cheese, and after our meals pick our teeth with Yankee tooth-picks.

But our own coal will we burn and our own mountain cheese and butter will we eat, and our own institutions of learning will we patronize.

While the foregoing is directed mainly to the farming community of this county, it is equally applicable to the State and the whole South.

How to Use Muck.

A correspondent wrote to the New York Farmer's Club to inquire if it would pay to dig and haul muck half a mile to the barn-yard, there compost it with stable manure, and transfer it thence "to a poor sandy, ten acre field, within twenty rods of place from which the muck was taken or would it be more advantageous to cart it to the field directly from the swamp?"

Mr. Ely replied: "My experience and pennyworth of observation commend the practice of leaving muck exposed to the cold of winter. It is, I think, much better and more available as a composting material after having passed the freezing and thawing which such exposure insures."

Mr. Williams said: "During a late visit to the farm of our excellent friend, Dr. Hexamer, I learned that his custom is to mix muck and manure fresh in equal proportions, and let the compost remain for several months. The tillers of the soil at Milford, Conn., draw muck in summer and fall and compost with fresh manure at once. Of couse, it is best not to have the muck too wet." Mr. Lyman, agricultural editor of the *Hearth and Home*, said: "In talking with farmers about the benefit they get from muck, I have only in one case seen positively fine results from the use of it when spread fresh from the swamps. One field I was shown where the crops were conspicuously better for years for a dressing of one hundred loads per acre from a swamp close by, but this was not muck exactly, but leaf mould. Another farmer, as good as any in Connecticut—many would say the best—hauls his muck three miles, and mixes it with the droppings of his farm animals every day, summer and winter. Thus his pile is trebled; for a bushel of yard-droppings mixed with two bushels of dry swamp muck, and allowed to stand some months, will be found as valuable a fertilizer as three bushels of yard-droppings. They mutually aid each other. The most useful and the most subtle parts of yard-manure fly away and vanish in the air unless fixed by some art. The sources of swamp muck has the power of fixing this volatile part of excrements, at the same time the sourness is removed. Hence, I would advise Mr. Brown to haul his manure a mile; two—yes, three miles for composting it, rather than apply it raw. He will find his account in so doing, for the free use of muck in his yard, about his drains, his roost and his sty, will kill all noisome smells, and remove what is frequently a nest for slow and lingering diseases."

Horticultural Department

Rev. J. B. CHESHIRE, D. D....Editor.

[From the Southern Cultivator.]

Wines and Vines.

In my last communication to the *Cultivator*, I promised your readers a continuation of the article on "Wines and Vines," and will resume the subject by furnishing some plain directions for making wine, both pale and red. I trust they will not be quite so much amused at my expense as some profess to be, by the few, concise and simple rules I shall lay down for properly managing our Scuppernong. However, lest I should be accused of wanting in a decent respect for chemical science, I will give you, my fellow laborers in the vineyard, a complete analysis of the juice upon which you will have to operate, and ask your attention to the fact that it contains, "besides the bitartrate of potasa, sulphate of soda, muriate of lime, sulphate of lime, phosphate of lime, nitrate of lime, hydrochlorate of soda, potasa, and tartrate of alumina," with, perhaps, a slight trace of some other salts, which you understand "are combinations of an acid with a base." Now then you have the analysis, and much may it profit you. One ought not to be too liberal in communicating his chemical secrets; and I shall therefore, hereafter be most obstinately silent about all manner of analysis. I gave above, all that I consider *indispensably necessary* to your success, and I hope it may agree with you. I shall now study to avoid all nitrates, hydrochlorates, phosphates and the rest, and try, without diving into such interesting chemical mysteries, to render my instructions practical and plain to all and every person, who may have engaged in the cultivation of the vine. Parties going extensively into the manufacture of wines, will, of course, provide themselves with the necessary scientific apparatus and work their vineyards with all the skill, and appliances which have lately been introduced in the art of wine making. The enterprise that will start a large vineyard, will also work it according to the most approved methods. I do not, at present, write to instruct such large operators. But here is my neighbor, who has set out as many as half a dozen, which are all in a flourishing condition. His excellent house-keeper of a wife is anxious to make something out of their surplus grapes for domestic use and comfort, suited alike for refreshments in the sick-room, or for recreation at the dinner table. Well, then, let me show you how that object may be accomplished. Gather the grapes when they are fully matured, on some dry day, and be very sure you bring none but thoroughly ripened fruit to your wine press. The work of gathering may be performed, either by picking, or shaking the grapes down upon a sheet spread on the ground to receive them, lightly jarring the branches of your vine with a forked stick. Separate all the trash and leaves carefully, and reject all the unripe berries you can find. Any method of harvesting will answer, which you find most convenient to yourself, but I insist upon it, that you take no fruit except such as is fully matured. For crushing the grapes, we use a wooden mill, consisting of a grooved cylinder, say 3 or 4 inches in diameter, about 18 inches long, set in the bottom of a hopper, and outside a crank to turn the machine. The hopper is shaped like the letter V, with the lower end cut off to give sufficient room for your cylinder. The roller itself is grooved about $\frac{1}{2}$

an inch deep, and one edge of the groove planed off so that it may feed only one way. It must not run so near the sides of your hopper as to bruise or crush the seed of the grape, (for that would make your wine bitter,) but it is intended only to mash the pulp and skins of the fruit thoroughly. A grape-mill of this description has been in use for many years in this country, and it performs the work of mashing very effectually. No one, however, let me observe, would venture to use a grape crusher with nails driven into the cylinder, when necessarily the juice would come in contact with iron, and might thus receive a flavor of that metal from the action of the acid, which we would consider a serious injury to our *must*. All contact, therefore, of the juice with any metal whatever is, most carefully guarded against, the tinned gallon pot alone excepted which it is necessary to have about the wine press. And even that, if suffered to stand any time without use, should be carefully rinsed out, and washed off in clean water, so that no combination whatever of metal and acid, may enter into your wine. The sugar, from one and a half to two pounds, crushed loaf, per gallon, we add to the juice as it runs from the press, and mix in large tubs prepared for the purpose, where the process of dissolving it can be assisted by the hand, and thus more rapidly accomplished. If brandy be used instead of sugar, (and it should be brandy distilled from the same grape you are pressing,) *that* also should at once be added to the juice, and not after the new wine has lost much of its sweetness by fermentation. Adding every fourth gallon of brandy to the juice of well matured grapes, will make you a richly flavored, strong, and sweet wine. I would rather *sugar* the must before barelling—because it can be more thoroughly and expeditiously done by hand, than by stirring it with a stick afterwards.

The Flowers' Grape also is capable of producing a good wine, which is of a red color. Gathering it is a different operation, from that of harvesting the Scuppernong. As this grape does not fall from the vine by being shaken, the bunches must be picked off by hand, in the same manner that all varieties of the bunch grape are gathered. The new wine is sugared, or may be *brandied*, like that of the Scuppernong; and the quantity of either per gallon is the same. The must of the *Thomas*, *Mish*, or any other species of the Bullace, may be treated in the same manner. If you have any vines of these last two varieties in bearing, you will observe that the fruit falls, as easily as that of the Scuppernong, and may, therefore, be gathered by shaking it down upon a cloth. Both sorts are earlier in maturing than the Flower's, which comes in last of all in the season. Indeed it generally takes a frost or two before it ripens thoroughly; and although the wine made from it may never rank as quite the equal of the scuppernong, yet as prolonging the vine dresser for his operations, it will, without doubt, prove to be a useful and profitable grape. And here I do not think it amiss to guard the young, and perhaps enthusiastic vine-yardist, against too hastily purchasing any new variety of grapes for vineyard purposes, merely because it is heralded to the public, by the windy puff of some advertising circular. If your region suits the Bullace, you may confidently rely on the Scuppernong, the Thomas, the Flowers, and the Mish as good wine-grapes. Other varieties will no doubt be obtained from this pro-

lific stock, which will take their place among the most approved sorts for wine. But except by way of trial, hold to varieties of known excellence, which others have tested for you, and thus made you safe by their own experience. Now, as to making your wine. This is an art which requires no little observation and study. But a very fair article, and suitable for all domestic purposes, can be made without any scientific apparatus to test your grape juice—nor need you, all the while, revolve in your mind the sulphates, hydro-chlorates, and nitrates. Any one who has the grapes, can supply himself with a good article of wine, which he knows to be free from all adulterations. As stated above, gather your grapes not before fully ripe, and crush them in a wooden mill, where there is no contact of the juice with iron. Prepare a barrel by unheading and washing it out with warm water—using a little lime, or unleached ashes to purify it, if it is a second-handed whiskey or brandy barrel. Scrub off the staves very carefully with a brush or a swab, which you can make of corn-shucks; and after this operation, burn in it a sulphur match. This you can make for yourself by drawing a piece of cotton cloth, no matter how long, and about two inches wide, through melted sulphur, taking pains to saturate every part of it thoroughly. You can melt roll sulphur in a common iron ladle for this purpose. Burn a piece, say two inches long, fixing it in a split switch, or a piece of wire prepared as to hold the match in your barrel, while the staves are yet wet, from the scrubbing you have given it. This done, it will be ready for use. Now, when your grapes are thoroughly mashed and torn to pieces by your crusher-mill, (having taken good care not to break the seeds,) turn the whole mass into the barrel purchased as above directed. Let it all ferment from night till morning, or about twelve hours; at any rate, until you observe the pomace to be working, which of course will be indicated by its passing off bubbles of gas, at the top of your barrel. Then draw off your new wine by a faucet of wood, previously inserted near the bottom of the barrel, put in one and a half or, if you wish to have a very sweet wine, two pounds of crushed loaf sugar to the gallon, mix well in oaken tubs, turn the juice into your barrel, (also fumigated with a sulphur match,) and let it go to fermenting. You should fill up well to the bung, in order that the wine may cast out thesuperfluous yeast,and purge itself of impurities. By and by, as fermentation subsides, put on the bung, gradually a little lighter, until some time in winter it will have ceased working, when the wine will become clear, and finally be in a condition to undergo the operation of racking off. You will thus have made your wine without using a press of any kind; still, you will find the press a useful fixture in your wine house, or perhaps I ought to say an indispensable one, in order to get all the juice out of your pomace, after it has stopped running at the faucet.

Let the barrel of wine be kept full to its bung; and on some clear, bracing day in January, or as late as March, you can draw the wine off from the lees, or sediment. When you have begun this operation, the more quickly it is completed the better; and in the case of not more than one or two barrels, all can be done in a few hours. The following summer during the month of June and July, your wines will undergo a second fermentation, which you will easily discover, by applying your ear to the bung hole

of your barrel. This, however, will be completed much sooner than the first; it will clear itself in a very short time, and thenceforward improve in flavor. It may be drawn off again next winter, though I can see no advantage in *such* frequent rackings, unless you aim to finish off your wines very early for sale. It will certainly be done at the expense of its strength. I have been asked my opinion, as to a kind of tube used for the purpose of guarding the wine during the first fermentation, against too much exposure to the air—whether it is really an advantage or not. I will touch upon this point, and a few other topics, with your permission, in another communication.

A. I. BUTNER.

Whiteville, N. C., Aug. 5, 1869.

Culture of Strawberries

We are prompted to give early directions on this and kindred subjects, that the planter may have full time to make adequate preparation. If postponed till spring a press of business is sure to come on, and either this or some other operation will have to suffer.

Any land that will produce a fair crop of cotton or tobacco, or even of corn, will yield a good crop of strawberries. But in this as in all other crops it must be borne in mind that in proportion to the amount of improvement put on the land, a correspondingly less distance may be given to the plant. On land of medium fertility the plants cannot be crowded without dwarfing the fruit. The strawberry plant will appropriate to itself a vast amount of fertilizing material, which—in order to obtain the best results—should be applied every year. Thus, if the cultivator would obtain from a single acre, as much as under ordinary culture he would gather from two acres, he must manure it twice as heavily, and set the plants at shorter distances.

We shall distinguish between field culture and garden culture. By field culture we mean the cultivation of a surface of eight or ten or more acres. As remarked before, good corn or cotton land will answer for this mode, and the crop will be mostly worked by horse power. The rows should be laid off three feet apart, allowing room for the passage of the harrow or cultivator, and the plants set from eighteen inches to two feet in the row. At two feet the number of plants requisite for setting an acre is about seven thousand; at the shorter distance nearly ten thousand. By most persons living in the interior on railroads, and not having an abundance of manure at command, this method will be preferred, the economizing of land being no object. An acre of land set in this way, with the plants kept clear of grass and the runners all cut off as fast as they begin to grow, may be expected to yield four or five thousand quarts of good sized berries, if the plants are of a prolific variety—such as the *Wilson* or *Russell;* or three thousand quarts of other and larger varieties, but less prolific—such as the *Jucunda, Trollop's, Victoria, Triomphe de Gand,* and *Golden Queen.* But then the larger the fruit the higher the price it brings in market and therefore the profit may be about the same in one case as in the other.

Suppose then the cultivator picks four thousand quarts per acre of the Wilson, and shipping them to New York gets returns of twenty cents per quart after paying all expenses. He realizes a profit of $800. Or three thousand quarts of the larger varieties, netting him thirty cents

per quart; his profit is $900. It is necessary, however, to be very careful to get varities firm enough in texture to bear shipment without bruising; and the Wilson is perhaps preferable to all others for this purpose.

In case the cultivator should feel reluctant to go to all this trouble and expense and risk of shipping, it will be an easy matter for him to sell his crop at home to Northern hucksters, provided it is large enough to attract them, and is convenient for transportation. We suppose he has ten acres in fruit. By dividing the supposed net profits equally with the buyer, his part would be $400 per acre, which could hardly fail to be satisfactory.

In this estimate we have set down both the product and the price at a low figure; but by getting the fruit early in market, and in good condition, Wilson's may be expected to sell for thirty cents a quart, and Jucundas and Triomphe de Gands at fifty cents.

Care of Farm Implements.

Farm implements cost a great deal of money, and should be well taken care of. It will pay very well to wear them out by judicious use; but it will not pay to let them lay about in fence corners, and other by places to *rot* out. There is no business in which care and economy should be more strictly applied than in farming. It is good economy to buy the best labor saving machinery and the best implements to labor with, because time is saved and strength economized in using them; but this machinery and those tools should be carefully housed when not in use, otherwise if left exposed to the weather, the iron parts will rust, and the wooden parts will rot, and the money spent in purchasing them is wasted.

Some farmers let their plows lay where they plowed the last furrow in the fall, until they are wanted for use the next spring. Harrows and swingletrees share the same fate. If called to subscribe for an agricultural journal costing one or two dollars, they will say they are too poor and cannot afford it, and they are in a likely way to remain poor by being too careless to take care of what has cost them much money. Any farmer who will subscribe for and read an agricultural paper will gain information worth many times its price, if he will properly apply it. It will stand by him as a friend giving just such council and advice as he needs, from the experience of others.—*American Stock Journal.*

Roots Flavoring Milk.—In regard to the use of turnips, we have fed them to cows for several years, as also cabbages, and made butter all the while, and will challenge the most fastidious to detect any flavor of them in the butter. Such food, fed to cows in moderate quantities just before or immediately after milking, imparts no unpleasant flavor to the milk or butter. It is in overfeeding, and at unreasonable hours, that causes the trouble.

We consider cabbages one of the very best kinds of green food for cows. We allow the milk to stand forty-eight hours, and find no ill effect from the milk becoming thick.

Deutzia Crenata, Flora Pleno. A fine strong-growing shrub, covered in the spring with fine double white flowers, tinged with pink, one of the finest flowering shrubs in cultivation. Quite hardy.

There is no blessing like health, particularly when you are sick.

Fire-Side Column.

Tattlers.

"Oh! could there in the world be found,
Some little spot of happy ground;
Where village pleasures might go round,
Without the village tattling,
How doubly blest that spot would be,
Where all might dwell in liberty,
Free from the bitter misery
Of gossip's endless prattling!"

Every community is cursed by the presence of a class of people who make it their business to attend to everybody's business but their own. Such people are the meanest specimens of depraved humanity which an all-wise Providence permits to exist on this cursed earth. It is well known that almost every person is sometimes disposed to speak evil of others; and tattling is a sin from which very few can claim to be entirely exempt. But the object of our present article is to speak of that distinct class of tattlers who make tale-bearing the constant business of their lives. They pry into the private affairs of every family in the neighborhood, they know the exact state of one neighbor's feelings toward another; they understand everybody's faults, and no little blunder or misdemeanor ever escapes their vigilant watchfulness. They are particularly well posted up on everything connected with courtship and matrimony, know who are going to marry, whom, and can guess the exact time when it will take place. They watch every movement of parties suspected of matrimonial intentions, and if there is the slightest chance to create a disturbance, excite jealousy, or "break up" a match, they take immediate advantage of it, and do all in their power to keep people in a constant state of vexation. They glide quietly from gentleman to lady, from mother to daughter, from father to son, and in the ears of all they pour their dark, bitter whispers of slander and abuse, and at the same time pretend to be the most sincere friend of those they talk to. Their black and nauseous pills of malicious slander are sugar coated with smiles and honeyed words of friendship.

Tattlers are confined to no particular class of society. They belong to all classes, and operate in all. We find them among the rich and the poor—"upper ten" and the "lower million," in the church and out of it. They are people who have no higher ambition than to be informed in regard to other people's private business, to retail scandal to their neighbors, and exult in fiendish triumph over the wounded feelings and bruised hearts of their innocent victims. Beauless old maids and childish matrons make the most accomplished scandal mongers in the world. They seem to take a tattling from the promptings of a natural instinct, and they prosecute it with an energy that would do infernal honor to their great leader—the prince of darkness himself. Our contempt for such graceless creatures knows no bounds, and we can find no words in which to express its infamy. What punishment they deserve we cannot know; but God knows, and as sure as his eternal justice reigns, they will receive a retribution proportioned to the magnitude of their offences against the laws of God and the interest of humanity.

The Office of Poetry.—There are so many tender and holy emotions flying about in our inward world, which, like angels, can never assume the body of an outward act; so many rich and lovely flowers spring up which bear no seed, that it is a happiness poetry was invented, which receives into its limbus all those incorporeal spirits and the perfume of all these flowers.

Bar-Room.

Young man! has not your eye been frequently attracted to a sign having the following ominous word on it?

"BAR."

Avoid the place; it is no misnomer. The experience of thousands has proved it to be—

A Bar to Respectability;
A Bar to Honor;
A Bar to Happiness;
A Bar to Domestic Felicity;
A Bar to Heaven.

Every day it proves to be—
The road to Degradation;
The road to Vice;
The road to the Gambler's Hell;
The road to the Brothel;
The road to Poverty;
The road to Wretchedness;
The road to Want;
The road to the Gallows;
The road to Robbery;
The road to Murder;
The road to the Drunkard's Grave;
The road to Hell.

Some, it is true, do not pass through all of these stages; but intemperance, persisted in, always ends in the drunkard's grave, and, we have too much reason to fear, in hell. The bar-room is truly

The curse of the drunkard's wife;
The curse of the drunkard's child;
The curse of the drunkard's home.

Those only who have known the bitterness of being a drunkard's wife or child can know the misery and the horror of a drunkard's home.

Young man! before you enter the bar-room, stop! Ponder the paths of your feet, ere it be forever too late!

Man of family! flee the bar-room, as you would in honor fulfill the pledge of love made to her who is the companion of your joys and of your sorrows.—*The Index and Southern Baptist.*

Beautiful Answers.

A pupil of the Abbe Secord gives the following extraordinary answers:

What is gratitude?

Gratitude is the memory of the heart.

What is hope?

Hope is the blossom of happiness.

What is the difference between hope and desire?

Desire is a tree in leaf, hope is a tree in flower, enjoyment is a tree in fruit.

What is eternity?

A day without yesterday or tomorrow, a day without end.

What is time?

A line that has two ends—a path that begins in the cradle and ends in the grave.

What is God?

A necessary being—the sun of eternity—the machinist of nature—the eye of justice—the matchless power of the universe—the soul of the world.

Does God reason?

Man reasons, because he doubts—he deliberates; he desires; God is omnipotent; he never doubts; therefore, never reasons.

FAN FLIRTATIONS.—Fan fast. I am independent.

Fan slow. I am engaged.

Fan with right hand in front of face. Come on.

Fan with left hand in front of your face. Leave me.

Open and shut. Kiss me.

Open wide. Love.

Open half. Friendship.

Shut. Hate.

Swinging the fan. Can I see you home?

Fan by the right cheek. Yes.

Fan by the left cheek. No.

To carry in the left hand. Desirous of getting acquainted.

Carry with handle to lips. I will flirt with you.

SHELL LIME!

We are prepared to furnish to North Carolina farmers, on any of the rivers, cargoes of not less than

1,000 BUSHELS SHELL LIME!

Price at kilns, 6 cents per bushel, slacked; 10 cents, unslacked.

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Dr. J. J. LAWRENCE, Organic Chemist, Norfolk, V[illegible]

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Koskoo is endorsed by the best physicians everywhere [illegible] and the following from Dr. Tillery, a practitioner of many years standing in the Old North State:

Rocky Mount, Edgecombe County, September 10

Dr. J. J. Lawrence—Dear Sir: I have used [illegible] Fluid Extract of Koskoo in my with the *happiest results*. I find it to be a *powerful Restorative Blood Purifier* and *Nerv* in diseases of the Liver, Scrofulous, Syphilitic and Nervous affections, *it is a remedy of immens* in obstinate almost every variety of Chronic Diseases it is indicated. Hoping you may meet with t which you deserve as a reputable and *reliable* manufacturer, I am sir, with much respect, your [illegible]

R. C. TILLERY,

From Dr. Fentress, an accomplished and experienced physician of Courthouse, Va., September 13

Dr. Lawrence, My Dear Sir: I have carefully examined the formula, as well as the [illegible] ties of your Koskoo compound, *and have prescribed it in some stubborn cases of Chronic Liver* [illegible] *pepsia, General Debility, &c., and in cases with the most satisfactory results*. I find it to be a *Alterative, and Hepatic* tonic and accomplishing its results without the [illegible] it has *given fine support to the General system* while its alterative effects are being [illegible] *recommend its use to the public.*

Yours, truly,

T. J. FENTRESS, M. D.

Koskoo *cures Scrofulous sores and ulcers*. From Mr. A. W. Mills, a prominent and well-k of Norfolk, Va.,

No. 11 Market Street, Norfolk, Va., Septembe

Dr. Lawrence—Dear Sir: Your Koskoo has worked wonders in my family. My daughter has from Scrofula since childhood. She had thirty-one pieces of bone taken from her ankle sever 1 from [illegible] sides had running ulcers in several parts of the body. Whilst in this condition she commenced taking your *it acted like a charm on her—under its use the ulcers gradually healed and her general health im proved*. She certainly says much in favor of Koskoo, and perhaps her [illegible] regard Koskoo as a specific lous affections. Your Koskoo also cured my wife of dyspepsia, from which she suffered severely. *better health than she has been in five*

With the highest regards, I am gratefully yours, &c. W. W. M

Koskoo THE GREAT INVIGORATOR—Read the following from the Rev. Joseph E. Martin, pastor Chapel, Portsmouth, Va.:

"This is to certify that myself and wife have used Dr. Lawrence's Koskoo, and can *testify to its effects*. Previous to taking it we were in a condition of debilitation—had no appetite, [illegible] and often violent attacks of headache and nervousness. One bottle of Koskoo *has improved our health*, and we regard it as *invaluable*, and most cheerfully recommend it to all who [illegible]

Yours, &c., JOSEPH E. MA

Read the following from Goddin, *the experienced and successful* "SPECIALIST," of Norfolk V

No. 6 East Main Street, Norfolk, Va., September 10,

Dr. Lawrence—Dear Sir: I have prescribed your "Koskoo" for [illegible] in its various forms, *most satisfactory* results. I am satisfied myself, *by experience*, that it will CURE that disease in I AND MOST OBSTINATE STAGES, and ERADICATE every taint from the system. Koskoo is certainly an TIVE OF EXTRAORDINARY power and FULLY [illegible] the *great popularity* which it has so rightly attain

Yours truly, N. A. HOLDEN, M.

KOSKOO CURES CHRONIC RHEUMATISM

Norfolk, Virginia, September 7,

Dr. J. J. Lawrence—Dear Sir: My son *has received so much benefit from your wonderful Kosk* cannot refrain from expressing my gratitude. I had tried almost everything without benefit. I [illegible] all sincerity, that your KOSKOO IS AN INFALLIBLE REMEDY for the disease from which he has suffered, as far as I can learn, *never failed*. If you only knew the immense amount of suffering that he has u then you could *appreciate the value of such a remedy as Koskoo*—THAT SURELY CURES. The great good it is *now doing* among us is *inestimable*.

With much gratitude, I am respectfully yours, &c., MRS. M. E. A. NEL

Dr. Lawrence—Dear Sir: Having been treated by several skilful physicians for Dyspepsia, Chron of Kidneys, General Debility, &c., without benefit, as a last resort I commenced the use of your Kosk pleased to say that under its use my health has been ENTIRELY RESTORED.

I am, sir, with much respect your obedient servant,

No. 5 Market street, Norfolk, Va., July 6, 1869. O. B. ME

Pacific, Franklin County, N. C., September 11,

This is to certify that for a long time I suffered very much from *inaction* of the *liver* and *constipat* bowels and tried several remedies, but received no benefit until I commenced taking Koskoo. I medicine about one month, and I was completely *cured*, and have remained well. I know of several c by Koskoo, and can cordially recommend it as a good medicine. JOHN H. BA

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THE

RECONSTRUCTED FARMER;

DEVOTED TO

THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN, }
JOHN S. DANCY, } - - - - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment" Agricultural Amendment.
For the Sword and Bayonet, the Plow Share and Mattock.

VOL. 1.] TARBORO, N. C., JANUARY, 1870. [No. 9.

LETTER FROM MR. DICKSON—COMMERCIAL VS. HOME-MADE MANURES,

[From the Southern Cultivator.]

SPARTA, GA. May 3rd, 1868.

Edit[or] *Southern Cultivator:* I had written to you that for the present I should not occupy any space in the *Cultiva*[tor], but as the planting interest might suffer somewhat from the article o[f] Mr. Gift in the May No., if not answ[ered], I have concluded to reply to so[me] of the points in it. It is distaste[ful] to me to say so much about my a[ffairs], and must be to others, and I ca[n] only get my consent to do it, from [the] hope that good may result to the [farm]ing interest, so much paralyze[d] by the results of the war.

Yo[u] are aware that all my practice and t[each]ing has been, that the use of the manures I recommend, gave the farmer the means of making and using double the quantity of home-made manures. I again repeat this, and as well as I can, with *demoralized labor*, still practice upon it. I not only consider it hurtful to the purse, but sinful to waste manures, or not to use the necessary precautions to save them. My motto is, to increase the fertility of the soil in a greater ratio than the population increases. My soil furnishes a portion of the food to raise fish and oysters in the Atlantic ocean, and if I can make a profit and improve my land by using the excrement of birds fed on fish, &c., it is my duty as well as my interest to do so.

Gen. S. Johnson (I quote from memory) just after the battle of Shiloh, said: "the true test of a General was success." He admitted some times it was a hard rule, but the only one he could be judged by. I say it is the only test that will do to try a farmer by. Now I do not consider that I am on trial by Mr. Gift's article, but the discussion involves a vastly important subject—one that will survive and be of interest after this generation has passed away. Mr. Gift says, in substance, that it is astonishing that I should have overlooked the great profits of home-made manures. He is mistaken in thinking that I have overlooked them. One of the reasons that I use commercial manures is, that I may save double the quantity of home-made manure. I make double the crops, have twice the amount of forage to feed away, and twice as much cotton seed for manure.

Mr. Gift has very much over estimated the manure he could save from the number of stock named, as I will show, by an estimate of the horses only. He estimates the ammonia alone, from forty horses, (after de-

ducting one-third) 16,070 lbs., at 40 cents per lb., equal to ($6,428) six thousand four hundred and twenty-eight dollars. He will not doubt that the corn and fodder are worth more as manure before they are eaten by the horses, than after they are consumed; then he will save the third he admits he will lose. The manure that will drop in the stalls from forty horses that work in the day, (say eight hours in the field and on the road,) three hundred days at work and sixty in the pasture, day and night:

40 horses, 1 peck each for 30 days, makes.....	3,000 bush.
40 horses, 10 lbs. fodder per day each, makes.....	120,000 lbs.
The corn at $1 per bus. makes	$3,000
The fodder at $1 per 100 lbs. makes.....	1,200
One-third dropped in the field and on the road, while in use	1,400
	$2,800

You see there is only two thousand eight hundred dollars worth of the raw corn and fodder dropped in the lot by the forty horses. Mr. Gift makes the ammonia alone in 3,000 bushels of corn and one hundred and twenty thousand lbs. of fodder, (after deducting one-third,) worth six thousand four hundred and twenty-eight dollars, whilst the whole was worth in the market, before being fed, four thousand dollars.

Mr. Gift prices ammonia at a higher rate than it costs in guano.

2,000 lbs. dissolved bones, cost me at home—$67; 2,000 lbs. Peruvian guano, at home—$92. The phosphate in that is worth one-half as much as the bones—deducting $33 50 for that, leaves $58 50 for the 300 lbs. of ammonia (at 15 per cent.) in the 2,000 lbs. of Peruvian guano, (that I used last year contained 16½ per ct.,) making it cost 19½ cents. per lb.

If Mr. Gift had seen the blaze that three hundred bales of cotton made, besides oats, wheat and machinery, and fifty-five fine mules, and other stock and property taken from me, he would think I had felt Gen. Sherman, if not seen him.

It is true, that I made fine crops before I used guano, bones, salt and plaster; but nothing to compare with crops made with them. I will tell Mr. G. what some of the good guano, &c., does. It is self-sustaining; it is punctual in payments; never repudiates or asks an extension of time; wants no stay laws or military orders; pays promptly, and on an average as much as one hundred and twenty-five per cent—sometimes a small per cent., and at other times as high as four hundred; it enables one to make double the quantity of home-made manures; improves the land; gives the means of keeping more and better stock; improves crops; makes the laborers more cheerful and willing to work; puts money in the hands to do fancy farming; purchases good machinery and tools; will afford some luxuries as well as substantials; enables you to work freedmen when they would bring you in debt without it. If I could realize all the profits on $12,000 to 20,000 worth of guano, I could do well throwing in the use of land, horse-power, tools, capital to furnish supplies, together with my attention, which alone increased the crop more than half. As large as you thought my investment last year in manures, my losses in stock by theft was equal to that. The guano and the rise in cotton were the only things that saved me.

Guano pays back the purchase money in cotton lint, which is but little loss of matter, and the guano furnishes more than that loss, and leaves a still larger amount in pocket. It enables one to plow twelve inches deep in a thin soil, inasmuch as the guano placed near the roots of plants, gives them vigor to go forth and find the soluble matter that is diffused so thinly through the land; without the use of some concentrated manure, the plant would never have vigor to hun

up the crop food so deeply mixed in the poor land.

I will tell you something that guano did for me when I could direct labor and be obeyed. I made per hand 10 to 14 bales of cotton, 800 to 1200 lbs. of pork, one mutton, three-fourths of a fat beef or 300 lbs., 8 to 10 colts per year, with corn, wheat, oats, rye, &c., to sell, amounting to one hundred dollars per hand; to keep one yoke of fine young oxen for every three hands, to aid in hauling muck, straw, and manure generally, and keep 200 acres of land under a good fence per hand; six to seven head of cattle, ten to twelve head of hogs, five sheep per hand—all besides being a cotton planter.

Instead of penning my stock to make manure, I left a shade tree for every twenty-five acres of cleared land. The stock would feed until full, then go to the shade to rest, and would drop but little manure until they got in motion, twenty to one hundred yards from the tree. I would place salt over the field in the right place; make straw pens and shuck pens in the right place in the field—sometimes little around them. I know this plan paid in meat, manure and dollars. The result is stranger than fiction. The profits have astounded me, and no person who did not know what I commenced with and what I had in 1861, can believe so much could be made in so short a time by farming under any system, with or without manures.

Messrs. Editors, I am willing to rest the case with the farmers, as to commercial manures, where Mr. Gift leaves it; but under any circumstances, I close now on this subject, and leave the question of ammonia, bones, &c,, to those who are interested in its use.

Very respectfully,

DAVID DICKSON.

NOTE.—*To My Private Correspondents:* Your interesting inquiries have been received. To most of your questions you can find answers in the *Southern Cultivator*. I have not the time to do any more than I am doing. I get a great many orders for the Dickson Select Cotton Seed. All the credit heretofore for the improvement, is due Mr. David Dickson, of Oxford, and prefer he should get the reward. I have used his seed for twenty years. I consider them the best seed out. I have now selected my seed three times in the last three years, which will justify me in selling. If I should conclude to do so, I will advertise in the *Southern Cultivator* in due time.

DAVID DICKSON, of Hancock.

WHY SOME PLANTERS DO NOT MAKE MONEY.

[From the Charleston (S. C) Republican.]

Some time ago we printed an editorial, showing that the actual average value of farm products to each adult male laborer in this State was considerably larger than in the North. We mean by this to indicate, that our soil and climate is such that the actual crop raised by each farm hand is worth more in cash than the average raised by a farm hand in New England or the Middle States. Now the farmers of those States pay wages which are nearly double what is paid here; they have long winters in which they must feed all their stock on hay and grain; they have more expensive houses and barns, more costly stock, and spend five times as much in dressing and educating their children as do our planters, and yet these sturdy farmers make money while our planters complain that they barely make a living from year to year. Now, why is it? Why do our planters, with every chance to do better, do worse than those hard working farmers.

We propose to give a few reasons, all of which do not apply to every planter or farmer in South Carolina, but one or more of which do apply to nearly all, in a greater or less degree, and all of which do apply to a great many.

I. There is poor economy in the use of material. There is too little reflection and study to make everything go as far as possible, and to use everything, great and little, to advantage. Manure is wasted by exposure. Guano and the phosphates are applied at the wrong time, or without sufficient care. The nature of the soil and the crop is not thought of in selecting manures. Too little manure is made on the farm and too much money paid for commercial fertilizers. No farmer need buy more than 150 to 200 pounds to the acre. If he will save the droppings of pigs, hens, horses, cattle, in fact, of every animal on his place and make compost, he can, at one-fifth his present expense, enrich a large surface of ground. Add to this the use of clover, cow peas, rye, &c., as green manure, and the planter can fertilize his fields far better than he now does at one-fifth the expense. And that fifth may go for one hundred and fifty pounds of guano to the acre.

But in a thousand other things is there a lack of system, thought and economy.

II. Then comes the neglect which is another species of waste. Plows are left in the sun and rain to rust out. A plow, well housed, will last twice as long as one left out of doors. And the planter pays the penalty of this inexcusable carelessness, by buying two plows instead of one in the course of four years. The same is true of hoes and all tools, of wagons, carts, and all the implemenss of farming. Wagons, too, both wear out faster and wear out the team faster for want of frequent "greasing." So of the harness; frequent oiling will make one out last two which are never washed or oiled. Buildings also, if white washed or painted keep both sound and clean, and the day of costly repairs and rebuilding is long postponed. A rickety gate if properly fixed is good as ever, if not, it is soon a broken gate. Just so of doors, wagons, tools, and all things.

III. Their management of workmen is often bad. The best tools should be provided. The work should be planned so that they need never stand idle, and it should be so planned that each may work to the best advantage. Men in the North often pay two dollars, and even three dollars a day for farm laborers, and so arrange work and provide tools that they get their money's worth better than many do here who pay fifty cents a day.

IV. While the planters do not live luxuriously, many live expensively, because there is great waste in their kitchens, and because instead of raising what they need in gardens, they raise simply cotton and corn and buy provisions. No farmer can afford to buy potatoes, wheat, flour, bacon, or meat of any sort, or vegetables. He can raise them all profitably. The very manure which pigs will make for his farm will almost pay for them, to say nothing of the better quality of meat he can get. He who sells cotton to buy bacon pays two freights to Columbia or Charleston, and two per centage of profit to the cotton broker and grocer. He might save these four items by raising the pig, and also fertilize his farm.

These four reasons simply suggested, and which a considerate man can carry out minutely for himself, seem to us sufficient to account for the failure of our planters to make money.—They must be more active, think more, plan more be more economical and practical in general management.

V. These reasons apply to the planter alone. Two more we will mention, outside of the man himself.—One is the heavy charge of the railroads for freight. The South Carolina railroad makes great boast of its low prices for through freights.—Those help Georgia people generally. But the way freights are exorbitant and grind our own people. This evil we look to the Legislature to remedy.

VI. There is another great evil. It

is the credit system. Planters should put in only so many acres as they can cultivate themselves, or be sure to pay expenses on, in cash, before the crop is sold. That is they should curtail the amount of land they plant till they are one crop ahead, instead of one behind. Then the planter is clear of the factor. He can hold his cotton and corn till they bring a good price. He can buy his provisions (so much as he cannot raise) of whom he pleases and at the lowest price. He has no heavy interest to pay on money advanced. He is no longer at the mercy of the broker; but is a free man. He is no longer compelled to pay to the factor all his profits, but keeps them for himself. Nor will the factor be much injured. He will do more business, a safer business, and at smaller per centages will make all that he should. Gladly would we see our planters putting in a few acres, and paying as they go. We know this is the only sure road to wealth and permanent prosperity.

COTTON vs. CORN, &c.

Editors Southern Cultivator : "Warren," in the August No. of the *Cultivator*, expresses the opinion that "it does not pay to raise corn, with cotton at 20 cts per lb." This is just the philosophy that has impoverished the South and enriched the North. Now the question which I wish to put to "Warren" and a very old cotton planter in the Southern States is, what has become of the proceeds of over one hundred million bales of cotton produced in the Southern States, within the last fifty years ; which has been sold at an average of not less than fifty dollars a bale ? There is nothing in the cotton growing region to show for it. The lands which produced this great amount of cotton, which sold probably for over five thousand million dollars *in gold*, and to a great extent, controlled the commercial transactions of the world, are poorer and more worthless, to-day, than they were fifty years ago. There are no manufacturing towns or cities —such as a person of reflection would suppose would grow up and keep pace with the production of cotton—to be found in the South. There are but few railroads, and they were built chiefly by Northern men, who procured the capital from the cotton fields at the South. What then has become of the money, and where and how has it been invested ? The true answer is ; It has been *exchanged*, by such economists as "Warren," for *bread* and *meat*, which they supposed it would not pay to raise with cotton at twenty cents per pound. And for all costs of carriages, from buggies down to wheelbarrows, and for all kinds of house furniture, and farming implements—plows, hames, ox yokes, &c , which might have been manufactured in the South out of timber, equal, if not superior, to the Northern, out of which they were made, and the money retained in the South and applied to extending its manufacturing interest. All this might have been done without diminishing one cent of the amount that would have been realized for cotton. If a sufficient number of laborers had been withdrawn from the cotton fields to make a plentiful supply of provisions, and to do the mechanical work, it would have diminished the amount of cotton it is true, but in proportion as the yield would have been diminished the price would have been increased.

If all should adopt "Warren's" theory, next year, and plant all the land throughout the cotton region in cotton, the crop would probably reach six million bales, and the price would go down to six or eight cents per pound ; and the price of corn would go up to two dollars a bushel, and bacon to fifty cents per pound. It would probably take the whole of the cotton crop to supply the people with the necessaries of life, until they could make another crop. On the other hand, if only one third of the land is planted in cotton, and two-thirds in corn, the result would probably be

two million bales of cotton, a bountiful supply of provisions, and a full supply of everything in the mechanical line. Cotton would go up to twenty cents in gold. The planters would realize as much money for two million bales, as they would from six, and be compelled to pay out no part of it for provisions. The money would remain in the South to be invested in manufacturing, and in the general improvement of the country. Let this policy be persevered in for a few years, and the South will present a much more magnificent appearance than the North, and the Southern people will be the most comfortable and independent on the face of the globe. Mr. Dickson thinks that it is not safe to push the manufacturing interest "too fast—not faster than markets can be found for the products manufactured." But are not the markets of the world open to the South as well as to the North? If cotton could be produced at the North, Mr. Dickson's views might be correct, but as this is not the case, there can be no danger in pushing manufacturing at the South. Southern manufacturers are not in competition with each other. The cotton has to be manufactured somewhere; it therefore adds nothing to the products manufactured, for it is to be done in the South. Every bale of cotton that is manufactured in the South adds just the difference between the value of the manufactured article and the raw material, to the material wealth of the South; because the expenses of manufacturing—after the machinery is paid for—remain in the South to be invested in some useful way.—The prosperity of the South depends upon pushing the manufacturing interest—especially in cotton. It has been neglected too long; it should have started with the cotton gin, and kept pace with the production of cotton. If this had been done, the Southern States would now be the richest and greatest manufacturing district in the world, and New England the poorest, and the late war never would have been thought of.—This state of affairs may yet be effected. If the Southern planters make their own provisions, and do their own mechanical work, they will have absolute control of American cotton, and will have it in their power to break down competition in manufacturing it. If cotton could only be produced in New England, does any one believe that the Northern people would allow a single bale to come South to be manufactured?

I agree with Mr. Dickson on one point. I am opposed to "begging for money to be brought to the South to be invested—it is not to our interest for capitalists to come." I want Southerners to build up the South.—This they can do, if they will abandon the policy of producing cotton for the sole benefit of others.

SOUTHERNER.

OAK GROVE, Sept. 1869.

LABOR.

Labor, honest labor, is mighty and beautiful. Activity is the ruling element of life, and its highest relish. Luxuries and conquest are the results of labor; we can imagine nothing without it. The noblest man of earth is he who puts hands cheerfully and proudly to honest labor. Labor is a business and ordinance of God. Suspend labor, and where is the glory and pomp of the earth—the fruit, fields, and palaces, and the fashionings of matter for which men strive and war? Let the labor-scorner look to himself, and learn what are the trophies. From the crown of his head to the sole of his foot, unless he is a Carib, naked as the beast, he is the debtor and slave of toil. The labor which he scorns has tricked him into the stature and appearance of a man. Where gets he his garmenting and equipage? Let labor answer. Labor—which makes music in the mine, and the furrow, and the forge. O, scorn labor, do you—man who

never yet earned a morsel of bread! Labor pities you, proud fool, and laughs you to scorn. You shall pass to dust, forgotten, but labor will live on forever, glorious in its conquests and monuments.

HOW TO MANURE OUR FARMS.

BY JUDGE FRENCH.

Water and Sand Essential but Insufficient—Value of Leaves—Peat—Sewage—Commercial Fertilizers.

[From the Country Gentleman.]

Tie a piece of muslin over a tumbler kept filled with water, and put upon the muslin half a dozen peas so that they will rest on the water, and suspend the tumbler in a sunny window, by three or four strings, and the peas will not only vegetate, but will grow a foot or two high and blossom with thrifty stems and leaves. Probably they will not produce peas, but as to the rest I will bear witness from personal observation.

It is common in propagating houses to start plants, as grapes from single eyes or cuttings of various kinds, by placing them in shallow beds of pure sand, and water, heat and light, they especially strike root and send up leaves and stems, and form a plant fit to set in open ground for ordinary culture.

Experiments often repeated have shown that a plant may be raised in a flower pot from a seed and receive nourishment but pure water, and yet shall far exceed in weight all the soil in which it grew.

In all the cases the plants receive all they want from the ordinary essentials of plant growth, air light, heat and moisture. To mature a profitable crop, however, we find practically that something besides air, light, heat and moisture is essential, and *that* essential is not pure silex, however well silex may answer for the first process of germination.

Besides our processes which change the physical character of our soil, as drainage and pulverization by plowing and the like; besides what may be called amendments of the soil, as when we mix sand with clay or peat, we must systematically add something which we call manure, or the richest soil will by and by be exhausted.

It is not my purpose to advance any new theory: I wish merely to make clear to the mind, what a little reflection might make manifest to any one. The air and heat and light and moisture will usually do their part with no artificial help.—And again, most of our soils contain enough of sand, so that we do not haul on forty loads, more or less, of compost to each acre to supply either of these essentials.

The want of manure is the limit of our cultivation on most New England farms. We might readily double and quadruple our crops if we only had manure enough.—Chemists, no doubt, tell us correctly what elements make up the matured crop, and the chemist knows better than we how many embarrassments nature interposes to his investigations, how the life-principle modifies chemical processes in the soil and exerts influence which he cannot measure. In general we know what we want to add to the soil, by knowing what we take from it, as shown by chemical analysis.—I shall not attempt to define what kinds of fertilizers we should apply to our land, but I desire rather to impress on the farmer the folly or at least the wastefulness of much of his labor in applying to his farm what he calls manure.

With many farmers, *quantity* seems to be the great object, and their manure heap seems valuable in proportion to size. They haul from the fields, the head-lands and the middle furrow, and all they can scrape of ordinary soil, into their barn cellars to the amount of hundreds of loads annually, and in a few months haul it out again upon the same fields mixed with manure from their cattle. Again it is quite common to team wet swamp mud a mile or two to be used in compost. So far as dry material is needed to absorb the liquids of the cellars, and dry soil may be useful, and a reasonable amount of sand even may be used as a divisor to render manure fine and convenient of application; but it is well to remember that soil from the field hauled into the cellar and out again, is not by that process rendered valuable. Peat and swamp muck contain usually valuable elements of fertility; but we often fancy that our teams are loaded with manure, when, in fact, they are toiling all day to haul water upon farms already too wet. The true value of some of the substances which we are in the habit of using in our compost heaps, is well expressed in a valuable essay by Dr. James R. Nichols, published in the Agriculture of Massachusetts for 1868. He thus disposes of two of our favorite articles, leaves and peat.

THE VALUE OF LEAVES.

A bushel of well pressed dry leaves, as they fall from the trees in autumn, weighs about four pounds; by further drying they part with a little more than 30 per cent. of water held in the cells of the leaf structure. A cord of absolutely dry leaves will weigh about 325 pounds, reckoning 100 bushels to the cord. In weight then, a cord represents about one-twelfth of a cord of wet barnyard manure, and if they contained the same amount of fertilizing material in same condition, would be equal in value to that amount of manure. The dried leaves I have found to stand relatively to the leached organic matter of manure as 10 to 30 in ash value, and when the soluble salts of manure are taken into account, the comparative value is as 10 to 60, weight for weight. A cord of dry forest leaves made up of the usual deciduous varieties, maple, beach, oak, &c., has an actual *manurial* value of not over *fifty cents*, reckoning stable manure at eight dollars the cord. Will it pay to collect them? Certainly not for the amount of fertilizing material they contain. As litter or absorbents in the stable, leaves have some value, but much less than straw, inasmuch as they lack the reedy character of straw, and because they are far more difficulty and slowly decomposed.

So much for leaves. Now let us see what Dr. Nichols says of

THE VALUE OF PEAT.

"A pound of good, thoroughly formed peat, taken fresh from the meadow upon my farm, lost of water in drying, a little more than 14 ounces. A farmer drawing from his meadow a cord of peat weighing 4,000 pounds, has upon his wagon 3,500 pounds of water, and but 500 pounds of the dry material he seeks. This dried and compressed, could be placed in a couple of our largest sized farm baskets.—The amount of ash constituents in the pound of peat after drying, was a little less than ten per cent. so that when we reduce the heavy load of peat which to the eye appears so

bulky and valuable, down to its contained inorganic principles, we find the whole amount to be less 50 pounds. I hope not to be misunderstood in the matter. The ashes are far from being the only manurial part of peat; and as in burning some of the most valuable elements are volatilized and lost, it is not good economy to burn peat for the purpose of securing the ashes. Fresh peat allowed to ferment in contact with lime is changed into new substances capable of nourishing plants, and where it can easily be obtained it pays the farmer well to secure a good supply. I cannot help remarking, however, in this connection, that many of the statements made by chemists and journal writers regarding the value of muck or peat are simply absurd, and are proved erroneous by practical experiment. The great value of peat, after all, lies in the absorbent qualities."

SEWAGE OF WASHINGTON CITY.

The report of the Department of Agriculture for May and June gives a paper by Dr. Antisell upon the "Value of Sewage Deposits of the City of Washington." It seems that a large part of the sewage of the city is discharged in the broad canal on the northern border of the public grounds west of the Capitol. Dr. Antisell speaks of the emanations from the canal as "potent causes of disease," and it is stated that "the color and odor of the mud gave vivid and strong impressions of fertility." A careful analysis of this mud is given by him, and the result shows that it has no value as manure which will pay for transporting it at all.—From 190 lbs. of the mud dry enough to transport, 25 lbs. of moisture may be derived. The remaining 75 lbs. he found to contain 71 25, lbs. of insoluble sand and silicates and, 3-75 lbs. of saline matter.—From one ton he estimates that fertilizing materials to the value of 98 cents may be obtained "to obtain which the farmer would have to haul 1,300 lbs. of water and 800 lbs. of useless, sandy clay.

CONCLUSION.

We all remember when we were young and were obliged to go to meeting all day, how joyfully we heard the minister's fifthly and sixthly, followed by finally, and how disappointed we were to hear him set in anew with a series of reflections. But really the scattered facts and opinions which I have drawn together, seem to need some kind of arrangement to give them consistency, and I will conclude my sermon with the following moral reflections:

First—Although as a good citizen of a commonwealth which has a prohibitory liquor law, I have a profound respect for cold water. It seems to be folly to haul a ton of it many miles, for the sake of 250 lbs. of peat or muck, which is then half sand.

Secondly—However essential silex may be to vegetation, yet since most of our soil contains plenty of it, it is unwise to cart it into our cellars except as an absorbent, or to use upon peats and clays.

Thirdly—We may learn from Dr. Antisell that the sense of smell is a very unsafe test of the value of manures. Two or three dead cats will scent a ton of spurious superphosphate to an intolerable degree, while the pure article is nearly inodorous. His statement also shows our liability to mistake bulk for value, and confirms opinions of scientific men, so often given, that the sewage of

cities in the common system of drainage is practically worthless for agricultural purposes, because too bulky to pay freight.

Fourthly when we consider that 90 per cent. at least of even our farm manure is water and sand, we may see that a very small bulk comprises all that is really valuable, and that it is not incredible that 500 lbs. of the right stuff per acre is enough for a crop, and that commercial fertilizers honestly made and properly inspected and certified, may be profitably used in the production of valuable crops. After consuming the fodder raised on our farms, we must look in that direction for the further supply of manure.

We clip the following eloquent extract from K. P. Battle's, Esq., opening address at the State Fair:

"Our State has great natural advantages. We have blessings of the earth and the skies, of the field and the forest. Neither tornadoes, nor earthquakes, nor bitter cold, nor torrid heat; neither caterpillar nor locust ever turn our willing landscapes into a blighted wilderness. Above us the sun sheds his genial rays, around us play health-bearing breezes; from the ground spring the numerous varieties of the vegetable kingdom, useful to man. Beneath us are the choicest minerals and metalic ores. Fat cattle browse on the perennial grasses which clothe the summits of our lofty mountains, while luscious fruits ripen without fear of frost. On the rich lands of our eastern counties grow rank corn crops, which calls to mind the famed fertility of the valley of the Nile. Never do the boll worm or caterpillar or inundations completely destroy the gold bearing plant in the broad fields of our cotton belt. Intelligent industry seldom fails to reap rich rewards in the grain and tobacco lands of our middle counties. Our rivers, as they rush in rapid descent from their sources in our mountain defiles, and break headlong over the barriers of the primitive rocks, supply water-power illimitable. Fuel under the ground and above the ground is accessible and cheap. Whatever may contribute to our comfort or luxury; whatever may aid us in the great struggle to subdue the forces of nature, our generous mother will amply furnish us if we make an honest effort to obtain them. Give us intelligent industry, guided by science, and few States will surpass North Carolina in the race of which wealth and refinement and happiness are the prices.

"It is to incite to this industry and create or quicken this intelligence that we are assembled together now. 'As iron sharpeneth iron, so does a man the countenance of his friend.' By our annual gatherings improved breeds of animals will be more widely distributed, new processes of culture made known, our dominion over the material world extended by new application of machinery, mental rust will be rubbed off, faults detected and rectified, old erroneous ideas exploded. In a word, in the largest sense will *educate* one another.

Let us then determine that each annual Fair shall be hereafter greater than its predecessor. Let us seek to extend the popularity and influence of our Society. Let us not be discouraged by beginnings smaller than we hope for. Let us aim at a grander success and more abundant usefulness. Let us follow

the counsels of America's greatest poet. Let us not 'look mournfully into the past.' Let us 'wisely improve the present.' Let us like true and undaunted Americans,' go forth to meet the shadowy future, without fear and with a manly heart."

THE VALUE OF AN EMIGRANT.

Among the papers read, at the recent meeting, in New York, of the Social Science Association, was one, by Mr. Kapp, Commissioner of Emigration, on the "Capital Value of the Emigrant." He divides emigrants into three classes, or periods, according to their ages. The non-productive class includes those under fifteen years of age, the productive class includes those over fifteen and under sixty-five, and the aged, those over sixty-five. Mr. Kapp estimates the cost of bringing up a child to the age of fifteen at $1,500 or about 100 per annum. In Germany, it has been ascertained, with considerable accuracy, that the cost is $750. The price of the necessaries of life and of labor is at least twice as much in the United States as in Germany. It is therefore estimated that every male laborer over 15, who lands in the United States, is worth what it would cost to produce him here, that is, about $1,500. The statistics show that about one-fifth of our emigrants are under 15 years of age. There are more males than females, and Mr. Kapp regards a male as worth just about as much as two female laborers. On the other hand, many arrive of the class of skilled emigrants, so that the average cash value of all emigrants —young, old and skilled—is just about $1,125. If we are not mistaken, this is something over the average price of slaves, in the Southern States, just before the war. The emigrants bring with them, on the average, property valued at $150, so that an emigrant, in a pecuniary point of view, adds to the capital of the country $1,275. As 4,038,991 emigrants arrived in New York, from May 5th, 1847, to January 1st, 1869, there was, during this period, from this source, an increase of national wealth, of something over five billion dollars. Those who are disposed to question these estimates, need not go out of this city for proof of their correctness. The value of property in New Haven, depends upon the number of its inhabitants. When the population of the city was only thirteen thousand, (in 1840) land could be purchased anywhere on Chapel street for $200 per foot.—Now the population is over four times as much as in 1840, and the value of land is six times as much. Not less than one-half of our increase of population is due to emigration. Double our population, and the price of landed property will be double, because there will be twice the demand for it.

The average cost of a farm laborer, to his employer, for one year, is said to be just about $400, and the value of what one laborer can raise from $60 to $75 more. This is the estimated profit upon each laborer, and is the interest of seven per cent. upon hs pecuniary value, that is about $1,100.

TO CURE AND SMOKE BACON.

At this season of the year, all our farmers are preparing to salt their bacon, and we propose to give them a receipe whereby salting and smoking can be done in simple and short process:

Take a large sized butter firkin, cask, or barrel, according to quantity of meat you desire to smoke. Place it over a fire of corn-cobs with the corn on. Meat smoked in this way is higher flavored, the corn seeming to produce a better taste than cobs or wood. Let the tub smoke from five to six hours. To one hundred pounds of meat take eight pounds of salt, two pounds of coarse brown sugar, (or three pints of molasses,)and two ounces of saltpetre. Rub a little fine salt into the hams and shoulders, then put the meat into a smoked tub, cover it with cold water, turn in the salt, sugar and saltpetre, cover closely, and set in a cool place where it will not freeze. If a scum rises on the brine turn it off, scald and add a little more salt. If desired to keep through the summer, in early spring smoke the tub three hours longer, put back the meat and turn on the brine when cold.

In a month after pickling, the hams will be ready to use. They can be kept in the brine all summer; and, if a ham is cut, return it to the tub for further use.

HOW TO IMPROVE COTTON AND SEED.

I have observed farmers sow their cotton seed, cover shallow, and in a few days I have seen a nice "stand" up. In a few more days I have observed that another "stand" was coming up. and if let alone a third stand will come up, but generally before this the plow and hoe comes in, and I have observed that the second and third stands are chopped up, and the first that came up was left to mature for a crop. I have also observed at picking time that some stalks have but few or no bolls upon them, some stalks with bolls half matured and rotten, the best is short-linted. I have heard such farmers say, "O! my seed are worthless, I will get seed another year from my neighbor," when his seed was as good as his neighbor's, who probably has done as he has done.

Now why this sorry cotton? There must be a cause for every effect and there is a cause for this. In the first place, the seeds that come up first were those black lintless seed, the second growth were those with more lint, and the last that came up were those thick, heavy linted seed, and which should have been left to mature for a crop.

But some will say how will we thus manage to get the last growth —give us the *modus operandi.* It is easily done. Plant your seed any way you prefer; cover with a plow (small) let the ridge stand. When the first is up good, run a board or light harrow over it so as to kill the first growth, and if done the same way with the second growth that comes up, so much the better; then the last that comes up will bear seed after its own kind, and upon the seed good long staple lint; and by so doing in a few years cotton would be greatly improved.

I know a farmer who sowed his cotton seed, the same kind he had sowed for years, and the frost bit down and killed his cotton after a good stand was up. In a few days another stand was up, and another frost killed that. He then concluded to plow it up and sow again, but before he had done so another stand was up. This he cultivated; the result was the best crop he ever made, and his neighbors came to him to buy seed, as they thought it a new and superior kind of cotton, and he being a good Mason kept the secret, until he realized nearly as much cash for his seed as he did for his lint.

THE
Reconstructed Farmer.

JAMES R. THIGPEN, }
JOHN S. DANCY, } Editors and Proprietors.
WM. A. HEARNE, - - Managing Editor.

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CAPE FEAR AGRICULTURAL FAIR.

We visited the first annual Fair of the Cape Fear Agricultural Society, of Wilmington, and while we will not attempt a description of half we saw, nevertheless, we can say we witnessed enough to satisfy us that this Association will prove a great auxiliary to the agricultural interests of North Carolina, and especially of Eastern Carolina.

The fair grounds are conveniently and beautifully arranged on the Wilmington and Weldon Railroad, near the city. We have no doubt but at some day not far distant, upon these pleasant grounds will be erected an Agricultural College for the education of young men for farmers.

The ladies of Wilmington are to have charge of the floral hall in future, and from what we witnessed in this hall at the inauguration of this, the first fair, what may we not expect hereafter at the annual exhibitions, when the ladies of the Cape Fear section shall join to make this hall not only an ornament, but of great benefit toward waking up the despondent to the fact that there is yet life in the old North State.

The hogs on exhibition proved conclusively that our people are turning their attention to hog raising, for we never saw any better at a fair in or out of the State.

The stock of cattle was not so fine. While there were some good blooded cattle on hand, they showed that they were not cared for, as the most of them were low in flesh.

On the ground was to be seen engines, cotton presses of different patents, reapers, mowers and a variety of farm implements, from the sulky plow to the garden rake.

Mr. Albert Farmer, of Wilson, was there with his popular plows manufactured at that growing and thrifty place. Mr. Richardson, of Weldon, was also there with plows from the foundry at that place.

These plows attracted the attention of all farmers who are engaged in cotton planting.

Mr. Froelich, of Kenansville and Mr. Westbrook, of Ridgeway, were on hand with a variety of winter fruits from their nurseries.

Mr. Froelich attracted most attention as he had many kinds of apples, pears and grapes, besides vines and a variety of all the grain that is planted in this country.

Both of these gentlemen informed us that they had a large quanity of trees and vines for market. We hope our people will turn their attention to North Carolina nurseries, and leave off running North after their fruit trees when they can do equally as well at home.

We have every reason to believe these gentlemen can and will supply our wants as well and as cheap as those who are drumming Eastern Carolina from the Northern States.

By patronizing our home nurseries we keep money at home, and at the same time

stimulate our nurserymen to greater exertions.

No wonder we are poor, when we even purchase our trees, shrubbery, vines and plants of all varieties, with but few exceptions, from nurserymen that are hundreds of miles from the State.

MARL.

If we are not mistaken, the first marl experimented with, was by that benefactor of his race, Edmund Ruffin, in 1818.

We will not endeavor to give even an outline of what his experience was, but will simply call the attention of our readers to his works on calcareous manures. They will be doubly compensated by their perusal.

We believe the first marl applied in North Carolina, was by Mr. Benjamin Dicken, of this county, in 1836. If we are mistaken in our recollection of dates and names, we would be glad if some of our friends would correct us, for we desire that the farmer who first made the experiment in this State, shall have the credit therefor.

As there are many sections in which there is an abundance of marl, which has not as yet been applied to the soil, it may not be amiss for us to say a word here as to how to dig it out and apply it. We will simply state how we dig and apply it.

We have two deposits, one four, and the other seven feet from the surface.

The deposit which is four feet from the surface, lies in a ravine about four feet below a level with the farm.

Before we commenced digging, we went down this ravine a sufficient distance to get a fall, there we commenced a ditch, and run it up of sufficient depth to drain the water from the marl. When we reached the bed of marl we widened the ditch the width we desired to make the pit. We threw the dirt from this pit all on one side.

When we got down to the marl, we cut a trench all around the pit, under the side of the bank, which conducted all the water to the ditch.

We then commence, dry shod, to shovel and throw out on the opposite side, where here is no bank. If the marl is too hard to shovel, as is often the case, we use a pick, to dig it up. All subsequent pits we dig on the end of this, throwing dirt on one side and marl on the other; draining all the water off as we did in the first instance by cutting a trench around under the bank.

After we go up as far as we desire with these pits, we go back, and haul all the dirt off we have thrown out of the pits, for compost, and commence a similar set of pits on the side of these just cut, observing the same rule, except that we haul the dirt that is thrown out this time as it is dug, in order to have it out of the way of the marl.

Some throw this dirt back into the pit side of the bed, which is quite convenient, but it is extravagant, as the dirt, as a general thing is very good for composting, being impregnated with marl.

In the bed where it is seven feet from the surface, we have never dug much. Just before the war we put up a long sweep somewhat upon the order that a great many persons draw their water from wells, except we had to have it well-braced.

At the end of this sweep, over the marl pit, we had a rope fastened and at the other end of this rope, we had a two bushel bucket hooked on, which worked between a bail; at the other end of the sweep, we had also a rope attached, this rope was placed under a roller, we had fastened to a log; to the end of this rope was attached a mule. When the bucket was filled with marl, the mule went forward and brought his end of the sweep down, which brought the other end up with the marl

When the bucket came up, a boy swung it off, and by a little exertion, turned it between the bail, when done, the marl is discharged.

A better way is to have two buckets, so the hands can be filling all the time, and it will be but little trouble to hook and unhook. You must have enough weight on the end of the sweep over the marl, to carry the bucket down when the mule backs. When we applied marl broad cast, we run our ground off into thirty feet squares, and in each of these we put from four to five bushels. We then spread it broad cast all over the ground.

We are of opinion, when farmers intend to compost for four or five years in succession,

it would pay equally as well to put fifty bushels in the compost per acre, each year, until he gets a sufficient quantity on the land.

We advise all farmers who desire to destroy the poor white grass, that grows upon their land, to scatter from two to three hundred bushels of marl per acre, and they will have no more of this poor grass, to be crawling up their pantaloons and tickling their legs as is the case after every frost.

QUARTERS FOR STOCK.

We have heretofore called the attention of farmers to the necessity of providing good quarters for their stock, as nothing pays better than to have your horses, cows, sheep, &c., sheltered from the storms of winter.

We therefore insist, that every man who owns one or more of these animals, is able to furnish them with comfortable quarters, and the man who does not protect his stock from the snows of winter, does not properly consult his interest; neither does he comply with his moral duty to his Creator, for although man was created the superior of all flesh, and power given him to control all other created subjects, it does not follow that he is to treat his brutes as a stock or stone, possessing neither flesh nor blood.

We have known farmers who were considered every economical, as they would save every cent they could in the way of sheltering every farm implement, &c., &c., yet at the same time, their course towards their live stock would lead one to believe they considered it no part of economy to shelter these animals.

How any person, who believes in the doctrine of accountability, can ask the favor and mercy of Jehovah, is astonishing to us, when their poor brutes are enduring the rigors of winter unsheltered. For in the sermon on the Mount, it is taught "Blessed are the merciful for they shall obtain mercy."

We ask every reader to think seriously about this, and see if he cannot get his consent to give these dumb creatures that constitute our chief source of comfort, the benefit of comfortable quarters.

It will not cost you much time, labor or money to go to the forest and cut poles, and rive boards, to build a house for your horse and cow.

Don't put it off until next winter for better timber, but start about it immediately, it will take but half a day to cut the poles, and with your unsheltered horse, you can haul them the other half; on the second day notch the house up, on the third rive out the boards, and on the fourth cover and stop all the cracks.

If it should be snowing when you have finished this, don't wait to make a bed of straw, but turn the horse in and make the bed afterwards.

FROM LENOIR COUNTY.

A gentleman residing near La Grange, in Lenoir, having seen the FARMER, writes us a letter full of encouragement and kind wishes, in which he says:—"I am much pleased with the RECONSTRUCTED FARMER, though I have only had the accidental pleasure of a hasty perusal of one number, and I wish to become a regular subscriber. The people throughout this and the adjoining counties, ought to sustain you in the great work you have begun, and I feel sure they will."

We thank Mr. B. for his letter, and have complied with his request. We are getting a circulation for our paper in Lenoir, and we are assured, by friends now working for us in that county, of a large list of readers in in that section; and it is a section, too, which we are glad to enter, for the soil of Lenoir is not surpassed by any other county, in fertility, and her people are an intelligent and hard working population. We hope to hear from our friend again.

ROCK ISLAND WOOLEN FACTORY, CHARLOTTE.

We neglected to mention in another place, the presence at the Cape Fear Agricultural Society Fair, of the fine sample goods from this North Carolina factory. This company is manufacturing at Charlote, woolen goods of every variety and the finest quality, and we heartily commend the Rock Island Woolen Factory, to the patronage of our Southern people.

OUR PAPER.

It is probably not known to many of our readers that our journal has been printed heretofore in Norfolk, though ostensibly in this place; a want of the necessary material here, compelling us to it. We are pleased to say, that this and all subsequent issues will be printed on our own type, in our own office at Tarboro, and we hope to be more punctual in our monthly visits to our friends, and to avoid a great many typographical errors, which crept in by reason of the publication at a distance. Our business editor is also changed, Capt. Wm. Biggs retiring, and Maj. W. A. Hearne taking his place. We take this occasion to say, and do so with pleasure, that this change is the result of other business arrangements necessitating it, and that we take leave of Capt. Biggs with the utmost good feeling, that he has, and still does enjoy our confidence, and that his management as business editor was both prompt, efficient and honest. Having our bantling now at home, under our own eyes, we think, in fact, we know, we can conduct the FARMER more satisfactorily to ourselves and our friends.

1869.

The year 1869 is numbered with the past, and the agricultural community of this section have reason to be thankful for the many blessings vouchsafed to us by a kind Providence. The spring was very untoward, cold and wet prevailing through nearly the whole of that usually pleasant season, and the summer was in full bloom before the prospect began to cheer the husbandman. The mercury mounted to an unusual height in July, and for several days the hottest of hot weather was experienced. In August, preceding and succeeding the eclipse of the sun, we had remarkable cool weather for summer. Take it all in all, the spring and summer of 1869 was uncommon in this latitude. With autumn, however, steady, propitious weather set in for mowing our crops of cotton and corn, and our people, black and white, made good use of time in housing them. At this writing, there is scarcely a lock of cotton or an ear of corn in the fields. Notwithstanding the great outcry about drought, drought, —that the crops were burnt up, &c., &c., we think it is now conceded that the crops of cotton and corn in this county are above an average one. In the middle and Western counties of the State, the drought was severe and the crops in that region are considerably below an average one. Through Eastern North Carolina, we have cause to rejoice at the fruitfulness of the earth. The fall in the price of cotton from 35 cts. to 25 cts. has caused disappointments of course, but the price has been sufficiently remunerative to make the cotton section more prosperous than any other part of the State, and to make us look hopefully to the future. Be of good cheer, then, farmers and planters of the State. Go to work with a will and success willl crown your efforts.

INQUIRY FROM OHIO.

NAVARRE, STARK COUNTY, OHIO,
December 17, 1869.

Messrs. Editors Reconstructed Farmer:—Enclosed please find fifty cents, for which send me a few of the back numbers of the FARMER. I think of visiting your State soon, for the purpose of buying a home—a farm, and I wish to learn all I can about North Carolina before doing so.

Do you think a man sixty years of age, from the North, would incur any risk in becoming acclimated to your climate?

Yours truly,

A. GRAVES.

In answer to the inquiry of our correspondent, we have to say, we do not think he would incur any risk at all, if he came at the proper season of the year—say in the fall or early winter. If he located in Eastern Carolina in the spring, he might be subject to some malarial fevers in the summer, but if he went west of Raleigh, at any season of the year, he would incur no risk whatever.

We shall welcome Mr. Graves, or any one else from his section, whenever they may come; and we take this occasion to again invite immigration from the North and West to our State, which, for climate, fruitfulness of soil, and variety in productions, cannot be surpassed by any country, or section, on the globe.

FOUNDRY AND AGRICULTURAL WORKS AT TARBORO.

It is with pleasure that we announce to our readers of this and adjoining counties, the establishment of a foundry and agricultural works in Tarboro, by Messrs. A. J. Hines & Co., at which our farmers can have manufactured almost every article necessary for farm purposes. Plows of every description made to order, and always on hand in quantities to supply the demand. We do not hesitate to say these castings are more durable than those manufactured at the North for Southern trade. We are satisfied, from our knowledge of the planters, that they will prefer to use home work to the foreign, since the plow made at home will last nearly twice as long as the Yankee plow.

We have seen farmers, in purchasing implements, select those of the lowest price, because they cost less ready money. This is the very height of extravagance. Provide good implements of every description, and then you can not only do more work every day, but do it better. And there can then be no excuse why a good day's work is not always performed.

Let us patronize home industry, for by so doing we keep thousands of dollars at home that, otherwise, are annually sent abroad.

BOOK FARMING.

What is "book farming?" We will tell you. If, when two or three farmers meet at the cross roads store, or blacksmith shop, they were to write out and publish their conversation on the manner and mode of their farming operations, and an inexperienced person was to take that conversation and attempt to conduct a farm thereby, it would be "book farming." But if a practical farmer takes a good agricultural paper, and tests the theory of the writer by the practice of the farmer, adopting whatever is good, and rejecting what is not, it cannot be called "book farming."

We are glad to find this prejudicial cry of "book farming" against good agricultural publications dying out at the South, and it is a healthy indication that our planters are reading and studying the science of agriculture, as they have never done before.

TO FARMERS AND MECHANICS.

We call upon the farmers and mechanics everywhere, especially in Edgecombe and counties adjoining, to contribute to the columns of the FARMER.

As Mr. Gadgrind would say, give us "facts," send us the result of your industrial operations. Let the farming and mechanical world know what you are doing, and thereby give them the benefit of your practical knowledge—your experience in farming and in mechanics.

The RECONSTRUCTED FARMER was started for the purpose of disseminating useful knowledge among the industrial men of the country. Its conductors are practical farmers, and through the editorial columns of the FARMER they give to the world the results of their experience, but they, like all others of their class, have much to learn yet, and a general and frequent interchange of opinion with farmers and mechanics, can but result in a benefit to them as men, and a public good through them as publishers.

So we invite one and all to communicate with us. Write about your farming operations, just as you would talk to us personally. Never mind your penmanship or your grammar—we will attend to that.

FARMING IN EDGECOMBE.

CEDAR HILL, Dec. 6th, 1869.

Messrs. Editors Reconstructed Farmer: As I promised to give you a statement of the corn and cotton I produced on my farm this year, I will now try to do so. I ran six plows, and have made ninety-three bales of cotton, (400 lbs. bales); and five hundred barrels of corn. I ran one plow entirely alone, and with that one plow, a man and a boy, fourteen years old, I made twenty-one bales of cotton, (400 lbs. bales), and seventy-five barrels of corn. With the exception of planting over my one horse crop on the 13th and 17th of May, there was not any other plow used in it at all. I suppose I may have hired a negro woman some two or three weeks to help cultivate the crop. Of course I had to hire help to pick the cotton out. I used for fertilizing only two bags of Patapsco guano. What I have written can be proved by good witnesses. Your ob't. servant,

K. H. DICKEY.

RAISE YOUR OWN MEAT.

Whatever may be said about the troubles and risks of raising pork at this time and the economy of buying pork and making cotton, we venture to recommend to every planter and farmer to raise his own meat if possible. There is a feeling of independence arising from a self-sustaining policy, which should commend itself to every farmer. And, brother farmers, if you want to have good bacon, we insist on it you must raise it yourselves.

Virginia and North Carolina can beat the world for good hams. The raising of hogs and curing of bacon seems to have been better understood in these States than in any other part of the Union in old times, and why should it not be so again? Many of our Edgecombe farmers still make their own supply of this indispensable, while others contend, hönestly no doubt, that they make money by buying their meat. We understand their mode of reasoning, and admit the facts in some locations, and while cotton is at its present high price, but we contend that it is a bad policy to be dependent where you can be independent, and we are fully persuaded that in a series of years that country which comes nearest being self sustaining is the richest.

TO THE LADIES.

We invite the ladies to occupy a place in the pages of the FARMER. We will at all times gladly make room for any communications on the subject of house-wifery, in all its various and interesting departments.

We know the ladies of Edgecombe cannot be surpassed by those of any other county in housekeeping, and we would with pleasure, give our readers the benefit of their well-earned experience.

We therefore ask the ladies to write for our paper, regular and frequently. It is our duty to instruct and prepare those rising up around us, for the duties of life that will soon devolve upon them, and the press is the best and most effective medium for such instruction.

HOW CAN WE IMPROVE OUR SYSTEM OF FARMING?

In a former article we called attention to some serious defects in our method of farming:

1st. That it leaves very little, if any, fixed improvement in the soil.

2nd. Its profits are uncertain—two years out of three.

3rd. That even if profitable:—If we persist in composting the soil of outlands, it must make our country poorer instead of richer.

For the last error, the remedy is obvious and easy, and almost any system which would permanently improve the soil would be very apt to give a profitable return. How can we do it?

Newly manured land is not properly a soil—but a bed of raw materials not yet ripened into soil, and easily exhausted by cultivation. Every farmer knows the difference between a soil rich in every thing necessary for a crop, and land made into a hot-bed whose evernescent materials vacate the soil at the first summons of the crop and its culture.

But what is soil?

Ages ago, experience taught the farmer the characteristics of a good or bad soil; also that constant cultivation, by depriving it of something, destroys its powers of production; and to make it productive again—we must replace that something which cropping has taken away.

Geology and Chemistry give us more specific information concerning these mysteries. Geology informs us that all soils are formed from rocks which have crumbled into powder under the action of ages and vecissitudes of climate: and these soils vary in quality according as their primitive rocks contained more or less of the mineral elements necessary for a soil. These minerals attract from the atmosphere other elements which further increase the fertility of the soil.

Chemistry teaches what these elements are. It teaches substantially—that soil consists of two sorts of matter—called—organic and inorganic. The organic elements are the same which compose the atmosphere and water, and about nine-tenths of all animal and vegetable bodies—dead or alive. They

are known as carbon, oxigen, hydrogen, nitrogen. Carbon is solid in charcoal and the diamond; but it is also that gas which sparkles in champaigne and soda-water. The other three are gases. Oxigen is usually present in things which taste sour. It is the vital principle in the air we breathe; without it animals would die, and fire could not burn, and all three are present more or less in fermenting bodies, and in those offensive gases which rise from decaying animals and vegetable matter, as well as in those perfumes which breathe their sweet around a lady's toilet. The soil obtains them from the air and water, and partly from decayed animal and vegetable matter in the earth. In the best soils they seldom average more than four per cent. of their weight; some good soils have but one to two per cent; while some heavy clays may rise to ten or twelve per cent—and yet produce none the better without due proportions of other matters.

The inorganic elements average in the best soils not less than 96 per cent; three-fourths to seven-eights of this is sand and clay in various proportions, the remainder consists of the earthy minerals—lime, potash, soda, magnesia, phosphorus, &c., &c., to make up the 96 per cent; thus, say, sand and clay 83, lime and other minerals 13—96; then 4 per cent. of organic matter—100. Of course different soils present an endless variety in combinations of these elements.

But all these things would be of no use for production unless they could be dissolved by heat and moisture, as ready food for plants; accordingly, nature, by a Chemistry of her own, combines the organic elements, above named, with some of the inorganic matters of the soil, to form the various acid carbonic, nitric, sulphuric, phosphoric and other acids. These acids by a further combination with the earths and alkalies, sand, clay, lime, potash, soda, &c., form various compounds known as salts—all more or less soluble. And thus we have—silicates of lime and potash (soluble sand) to form stalks and husks of grain crops; carbonate of lime (marble, shell, lime, chalk, marl, &c.,); sulphate of lime (plaster of paris); sulphate of alumina, (alum) soluble clay; nitrate of potash (salt petre); chloride of soda (common salt) and others, for the woody fibre and general structure of plants; and also phosphate of lime (bone dust) for the grain and fruit. There are other compounds in the soil, but these enable us to form some general idea of the structure of a soil, in which all these matters vary according as soils are good, bad or indifferent.

These same organic and inorganic elements are the constituents of all vegetable and animal bodies as well as of soils; but in plants and animals their proportions are just the reverse of those in the soil. Thus the *inorganic matter* in a soil ranges from 88 to 99 per cent.; the *organic matter* in plants from 88 to 99. The *organic matter* in the soil ranges from 1 to 12 per cent.; the *inorganic matter* in plants from 1 to 12.

We know what few ashes most plants have when burnt. The ashes of different crops and trees range from less than 1 per cent. to 12 per cent. of their weight. These ashes contain their earthy inorganic matter; the 88 to 99 per cent. driven off by burning contain their organic matter. So it would seem that crops take from the soil in largest amount the very elements which it has the least of to spare. But such is not the case; although a soil must have a fair proportion of organic matter, yet the crops draw most of them from the atmosphere.

These and some few others are that something which crops take from the soil, and which must be replaced to keep it productive, and this we do by the familiar process of

MANURING.

The above premises lead us to infer that some two or more elements of the soil may be used up by cropping, while the rest—some half dozen or more—may remain in great abundance; yet the absence of these few—sometimes of only one—will make the soil unproductive. This is no doubt true. Now if the farmer could know what these few absent elements were, he could simply replace them, and his soil would all be right again; and he would save the great labor of hauling tons of things his soil did not need, to get the few things it wants. This is known as

SPECIAL MANURING.

Its object is to place in the soil exactly the few things it needs, or such as a special crop may require. Thus if it need lime and carbonic acid, a few loads of shell lime or marl might supply both. If potash a few loads of ashes, if phosphate of lime a few bushels of bone dust, and so on.

This would approach something like perfection in manuring, but science has not yet made such a system cheap and certain enough for practical purposes. The nearest approach to it, is the preparation of some concentrated fertilizers, which work wonders in favorable seasons; but are apt to prove too uncertain and expensive when seasons are unpropitious. Extremes of rain or drought neutralize most of the benefits expected from such fertilizers. *The remedy would be thorough drainage and the ability to irrigate at pleasure;* with these, we might expect to see wonderful things done by special manures.

We are also led to infer that if we place in a warm soil all the necessary mineral matter, in just proportions—and let it rest—it would become rich of itself, by absorbing the requisite organic elements from the air, rains and dews. Since a soil may become impoverished by losing but few of its mineral ingredients, it would be necessary to restore only these few to regenerate it. These facts and speculations, no doubt, all point in the right direction; and science may ultimately bring about that agricultural millenium which her votaries expect; but until that time comes, the farmer must continue to perform the work of the chemist without knowing it, in the mode and manner sanctioned by the experience of ages. He must rely chiefly on the old system of

DOMESTIC MANURES.

Whatever new helps we may adopt in manuring, the barn yard and compost heap must form the basis of all our operations; with them we must include the various forms of lime, guano and such other fertilizers as custom may make us familiar with. How can we use them to the best advantage?

The rules and practices which have carried agriculture to the highest perfection in modern times, come to us from countries in higher northern latitudes than our own. They do not grow semi-tropical productions for the markets of the world as we do—requiring exhausting summer culture. On the contrary their crops are mostly what may be called permanent crops; such as grasses, small grains (cereals), green crops, orchards and stock; any of them occupy the land one year; some of them many years—free from the harrassing work of the plow under the scorching suns of summer. Hence their soils are rarely exposed naked to the vecissitudes of climate, for many months, like our's are. The nature of their productions easily leads them to a natural system of improvement—consisting of manuring and rotation of crops—by which the soil is protected at will by a covering of vegetation; the sward of which is, in due time, plowed under for manure. One half or more of a farm may be for years under grasses and ameliorating crops, most of the balance in cerials, leaving but a small portion of summer culture. By this systematic union of manuring and rotation, art is made to conform as near as possible to the operations of nature, by which land is ever producing, and ever improving.

RESTING LAND.

When land is left to produce nothing but a natural crop of weeds and grass, to fall and rot on the soil, we call it resting the land; in the ruder stages of farming where land is cheap and abundant this resting of land is the first step towards renovating the soil. The next is manuring as often as possible; the third is uniting manuring and resting together. But it was soon apparent that land was unprofitable during the time of rest, and became foul with a vegetation sometimes very troublesome. These things, with the heavy labor of frequent manuring, naturally raised the question, how to lighten the labors of manuring—by resting land under crops affording some profit—while they insured a more cleanly cultivation and greater improvement to the soil. The process of putting different parts of a farm successively through this routine, is called.

ROTATION OF CROPS.

Like dancing, drilling soldiers, and many

other things, it is easier to practice a good rotation than to describe it on paper. Every plan of rotation has its difficulties, and the preference and management of any, must depend on the production, circumstances and judgment of the individual farmer. Rotations vary from four to eight years. Theory seems to suggest a division of the farm into as many lots as the proposed years of rotation, and numbering them accordingly. Then concentrating large masses of manures on the first one or two lots, and this dose is intended to last through the whole term (say 7 years) till you rotate to them again. All the other lots in the mean time are in their turn in grass or green crops, and if possible manured according to ability. Each year one or more numbers receive the same treatment as the first, while the lots which have been manured and cropped are in their turn left under grass and ameliorating crops. In every lot the sward plowed under and the mineral matter to go with it are prominent items in any rotation.

To begin seems to be the worst, especially on reduced land; for it implies heavy manuring to start with, or rather a slow progress without it.

We have neither time nor ability to discuss the many interesting questions which such a system suggests. It presents a wide field for the exercise of the highest intellect and industry, and invests agriculture with an interest beyond most other vocations.

So far our reasoning leads us to the following conclusions:

1st. Various mineral substances are necessary to form a good soil. They are diminished or lost by cropping; to restore them we must actually replace them in kind, except the portion replaced by common manures.

2nd. By leaving the soil in a state of rest, these minerals fertilize it by combining with each other, by attracting organic matter from the atmosphere, and by combining with any putrescent matters in the soil. But like the minerals, these elements also become exhausted; we replace them partly by common manures, partly by vegetation plowed under.

3rd. A rotation of crops is intended to facilitate this process by giving considerable interval of rest to the land under grasses, by which all its mineral and organic matter may combine to form good soil. In due time the sward is plowed under for manure, and the crops of the rotation are expected to remunerate expenses by grassing, soiling and hay.

4th. Protect the land as much as possible by a covering of vegetation, by means of small grains, grasses, peas and other grain crops, which require no culture after sowing.

5th. Cultivate as seldom as possible on the same lot, such crops as require summer culture, because the preparation for, and culture of, such crops as cotton, corn, &c, expose the lands naked to the winds, rains and hot suns for many months, till the crops themselves can shade the land from July till October, and afterwards till spring reclothes the fields with verdure.

6th. Except grasses and green crops, never repeat the same or similar crops on any lot during a rotation Such a repetition implies an equivalent manuring.

This leads us to inquire what sort of a rotation would probably suit our circumstances?

Our first impressions are that a rotation would leave too small a surface for valuable crops, that too much land would be idle. But a rotation is intended to prevent this very thing, to make all the land produce something, and a portion to produce much heavier valuable crops; but it also implies a considerable, and we believe an advantageous, change in our system, in which small grain and grasses will be prominent, and this implies keeping stock of all sorts to make this system profitable, and this alone might serve to fill the gap both in our system and our pockets.

A three or four years rotation is said to be a severe one for the land, and expensive for the owner; yet our anxiety to realize cotton crops would probably make us impatient under even as short a term as this, when experiment might show that a longer term of even seven or more years might suit our climate and productions best. Be this as it may, unless some radical change is made in our system, our people must content them-

selves with slim profits, or find some other region to grow their favorite staples in. But a people cannot change at once their habits of agriculture, even if they wish to do so. In deference to this propensity we venture to propose a plan which, if not properly a rotation, may lead to something adapted to our condition and in the meantime help to fertilize the soil.

In northern climates clover and other grasses form the base of all their operations. Clover takes two or three years, and other grasses much longer to perform their part in a rotation. Now we believe our field pea, which is as valuable as clover for a manure, will accomplish in one year what these grasses do in several. But it will no doubt require a greater outlay of money and labor in place of time required for a rotation. It is possible, however, that our fine climate and productions may sustain this draught on their fruitfulness. In due time by connecting this plan with stock and grasses we may step into a rotation suited to our circumstances.

Many of our planters are familiar with the pea as a fertilizer, but we believe few if any of them have fully tested its powers in any persistent system of manuring. Since it is not a new thing it is with some diffidence I submit a programme for

THE FIELD PEA AS A FERTILIZER.

Our planters usually manure heavily for cotton or tobacco. Let us suppose this to be the first year of a rotation. These are exhausting crops; but either of them prepares land well for corn, wheat and oats. The second year, suppose the cotton to be followed by wheat or oats, this still further exhausts the land; here is precisely the point where the cerial crop in a rotation should be followed by grasses and comparative rest, to enable land well supplied with mineral matter, to recuperate. Now we propose to do this with the field pea instead of grasses; to do this we must in the pinch of summer work, sow and plow under the peas and stubble, and even manure them too, to supply recent exhaustion, (for grasses would require some manure).

This gives a heavy crop of pea vines instead of clover. In their rankest state, plow them under and, if needed, top dress with twenty-five to fifty bushels of lime per acre, ashes would do, or both. This brings us to the third year, ready for a crop of corn, with or without manuring.

Prepare the ground perfectly, then plant; after it comes up, thin out or replant; delay the first working as long as possible without injury, then work it thoroughly. Postpone the next working as long as possible without injury, and when you do work it the second time, sow peas and guano broad cast and plow them under; work the corn carefully with the hoe and leave it to its fate.

In this operation, it is supposed that the guano, by so late an application, will be used in forming grain instead of being expended in forming the stalk. That the pea crop will smother the grass, shade the ground in dry weather, or help to consume moisture in wet. That the guano will more than supply any defect of the third plowing omitted, and the labor saved will help to pay for the guano; besides the early sowing of the peas may insure a crop of peas, when if sowed at the third plowing might give nothing but vines.

These labors bring us to the fourth year. At this stage we have several plans to choose from:

1st. Let the end of the third year close a three years rotation, and this fourth year begin a new one

2nd. Or leave the land to rest this fourth year, to complete a four years rotation.

3rd. Or retrace our steps with small grain, guano and peas, back to a cotton crop, making a five years rotation, or vary it at will according to circumstances.

This system is evidently expensive, but it insures good crops and progressive improvement to the soil—it would be better than our present precarious one.

Yet if this plan has any value it is because it approximates a better one. Why not then adopt a better one at once? All our present system needs, to make it as perfect as possible, is a judicious rotation, whereby cerials, grasses, stock, &c., will abound with our other valuable products, and the land be endowed with perpetual strength to bear them.

None but new countries, and the most favored spots of the earth, can sustain a planting system like ours, unless backed by expensive manuring, which may end in little or no profit. A century ago the Abbe Raynal and other writers complained that the West India Islands had been rapidly exhausted by their planting. We all know how the soil of our older States became worn out from the same cause. This was charged to slavery; but if planting proper had been operated by free labor the effects must have been the same; the very nature and object of planting would have produced them. For its object is to produce the most valuable products for the markets of the world, which naturally ships off the life materials of the soil.

It is with wonder we read of the immense populations and armies, in olden times, fed and clothed by comparatively small states. We can find but one way to explain it, but that is conclusive.

The Romans, Greeks and Jews, knew nothing of cotton, tobacco, tea, coffee or sugar, and other things, luxuries to us, of the four last centuries. Thus clothing was generally of wool, sometimes of flax. It must have required an immense number of sheep and goats to clothe so many people, while they supplied at the same time meat for food and sacrifices; adequate pastures and fields supplied forage and bread. Thus the same crops both clothed and fed the nations. But our cotton, sugar, tobacco, &c., yield no life-sustaining food; sugar only partially does so, and the forces engaged in growing them try to produce only food-crops enough for their own wants.

October, 1869. WATCHMAN.

[Written for the Farmer.]

LARGE OR SMALL FARMS FOR THE SOUTH.

In countries densely populated, near great commercial centres, like some of our North eastern States, farms are usually small, and are apt to exhibit a high state of cultivation and productiveness. Favorably located for supplying the demands of a near market, the farmer has every motive and also the ability to maintain his enviable position.

From this it has been inferred that small farms are the best for all countries—especially for these Southern States. But correct observation will be apt to show that in remote districts, strictly agricultural, small farms are generally the very ones which exhibit the least thrift and profit. They are proverbially poor men's farms, and are apt to continue so, until some larger one swallows them up. On the other hand, what we call large or medium farms, generally command success, and cheer the hopes of the country and the owners. "A small farm well tilled" is no doubt a good thing—but a large one well tilled is better for the owner, and no worse for the country at its present stage of progress.

Small farms for everybody smacks somewhat of agrarianism, and perhaps this notion of small farms for the South may prove to be a favorate one among actual tillers of the soil inured to labor, and others who are not farmers, such as manufacturing and trading capitalists, who look upon the farmer merely as a drudge to supply them and their dependents with comforts of life, and tho other arts with raw materials. They can see no fitness in the idea of a capitalist—farmer or gentleman farmer; but place all on the same footing of common laborers. And indeed this seems like the probable result of small farms, not able to command much help.

In their estimation, a farming gentry is a landed gentry, and this is a landed aristocracy not to be tolerated, because it might be too strong a rival for that aristocracy represented by manufacturers, merchant princes, and stock gamblers, who aspire to rule all other interests. Therefore, if the farmer or planter is not content with the lot of an humble laborer on a small farm vouch-safed to him, let him leave it to some one else who will be; and if he will become a gentleman, let it be in some sphere more congenial with true aristocracy than the clods of the field.

Such might be supposed, the course of reasoning which would divest agriculture of its true dignity and power and lay it helpless and humbled at the feet of every other sordid and greedy interest in the country.

In districts chiefly agricultural—even in the great Northwest, it is found necessary to produce wheat, corn, hogs, &c. in masses to

make farming profitable. Small farms cannot do this, even in meat and bread crops — How then can we expect a planting interest like ours to meet our own wants and those of the world by a small farm system?

There is some difference betwaen planting, and small bread and meat farming. Their origin and history are very different.

America was discovered in 1492. Five years afterwards (1497) the Portuguese, under Vasca de Gama, doulbed the Southern end of Africa, which they named the Cape of Good Hope, and in a few months found themselves in the East Indies, face to face with the luxury and despotism of Asia. Compared with these riches and luxuries, Europe was then rude and semi-barbarous. The Portuguese soon spread their rich productions through the nations of Europe, and the struggle for their trade with the east, reared an intense and ambitious rivalry among her different kingdoms, who soon conceived the idea of finding or producing in America, those rich productions they had found in India. For this, and from mutual jealousies, they made every effort to colonize America, and their efforts were crowned with success during the 17th century—both in the islands and continent of America. Then came our revolution of 1776, and the independence of the British colonies—often called the British plantations. Among the interests which continued to grow in prosperity and importance were those of farming and planting. Farming in the Northern States, both farming and planting in the milder Southern States.

Farming proper, is compatible with limited means and small surface, as its first intention is chiefly for the support of a family; a surplus, if any, goes to market. But planting, following the original purpose of its projectors, assumes the prominence of growing the most valuable productions of the earth for the markets of the world, and to command these markets by their uniform abundance.

With us these have consisted chiefly in cotton, sugar, rice, &c., besides bread, forage and meat crops. Many of these require much expense and capital to presevere and prepare them for market. These expenses must have land extensive enough to bear them. Such extent of land must have laborers and teams enough for cultivation, and all these must have ample supplies and support. Such establishments require much ability to manage them successfully. All these things render it improbable that planters can succeed under a small farm system.

Planting is to small farming, what a heavy manufacturing establishment is to household manufacturing, or a princely shipping merchant to a retail shopkeeper.

Besides it would be singular in this age of grand developments, when every business prospers best as it expands its proportions, that planting alone must seek successs in diminutiveness, and that contrary to all its past career and history.

Small farms for the South, sounds very much like a yankee-notion, but if it be so, the yankees themselves take special care to ignore it when they engage in planting at the South, and for very good reasons; because it is contrary to the enterprising spirit of the age, and to the true nature of planting itself. Any attempt to reduce it to what is called small farming, will probably end in small production and smaller profits, and this would necessarily lead to a loss of that prestige and power which the United States held through her planting interests, over the commercial exchanges of the world, but which she has deservedly forfeited. First by a series of persistent aggressions on this great interest of the Southern States, and then by crushing it by an insane, vindictive war without any reason, justice or necessity.

November, 1869. WATCHMAN.

ADVERTISEMENTS.

We invite the attention of our readers to the advertisements to be found in this number of the FARMER.

We represent some of the best houses in the country, and it may be taken for granted that we will insert no advertisement except the most reliable houses.

[Communicated to Reconstructed Farmer.]

EXPERIMENT TO TEST THE INCREASED RATES IN THE YIELD OF COTTON PER ACRE, TO THE COST AND QUALITY OF FERTILITY OF FERTILIZER APPLIED.

SCUPPERNONG, NEAR NEW BERNE,
November, 15th, 1869.

14	13	12	11		Number.
Peruvian	do	Patapsco Guano,	Nothing,		Kind of Fertilizer.
430	430	200		lbs.	Quantity to the acre.
21 50	15 05	7 00		$ cts.	Cost of application.
1 290	1 021	731	484	lbs.	Production in the Seed.
806	537	247		lbs.	Increase over Unmanured.
187	126	123 50		lbs.	Increase per cost of Fertilizer.
90 30	71 47	51 17	33 88	$ cts.	Market value per acre.
68 80	56 42	44 17	33 88	$ cts.	Value after deducting Fertilizer.
80	87	81	80	per. ct	Manured before freezing weather.

This experiment was made upon a small plat of ground of uniform fertility; the soil a thin loam upon a sub-soil of stiff retentive clay, which had been under cultivation for the last twenty-five years, and worn down and exhausted to such a degree, as to yield no crop with any profit. It was manured with 300 lbs. to the acre of Patapsco Guano, in 1867, and produced a crop of cotton equal to 600 lbs. in the seed, which might be considered a fair yield for so bad a season. Again, in 1868 it received a very small sprinkling of Peruvian Guano, and was put in sweet potatoes. It was selected because of its uniform character, and best adapted, to test the object of the experiment; the ground carefully measured, and the yield at different pickings weighed minutely to pounds and ounces, and the result faithfully given in the tabular statement.

I might rest here, and leave the table in the hands of your agricultural readers to draw their own deduction; ample data is furnished, without any comment of mine, for them to determine whether or not it would be advantageous, upon like soils, to employ these or other fertilizers to increase their yield of cotton; or, at least, to stimulate them to experiment upon their own farms, and draw their own conclusions from their own trials and observations.

I confess I am prompted by the interest I take in agricultural pursuits, in giving this to the public, with a view of inducing others to make like experiments and publish them.

In the language of the highest known authority, Prof. Johnston, of England: "It is by experiment that all the remarkable results—theoretical as well as *practicable*,—of modern chemistry have been arrived at; but by experiments cautiously made, frequently repeated, and logically reasoned from." It is with no hope of aiding science, that I propose these experiments to be made, for no such view can be taken with the use of compositions, the chemical qualities of which are unknown, but it is with a view of directly aiding the agriculturist, at a time when most of them, owing to the present disorganized state of society and labor, have to look to commercial fertilizers for the improvement of their soils and crops. As highly important as it is for us to know the relative value of the different fertilizers offered for sale, with some of known value, as stable manure, or pure unadulterated Peruvian Guano. Yet I confidently state that I have never met, even among the most intelligent cultivators of the soil, a single man who could run his eye over the advertisements—which now comprise a long list—and give any information respecting their comparative value of each, or to say known standard. The certificates produced by the manufacturers of astounding results produced by the use of their fertilizers, have defrauded many, and done a

serious injury to other fertilizers of better quality; so that I look upon all certificates of no value, having myself been the dupe of well authenticated statements made by farmers of known probity and honor. I would here caution all from making any experiment with sample bags sent to them for that particular purpose. I have invariably refused to do so, with several who promised to furnish it gratis. It is too easy a matter for a mere fertilizing ingredient to be incorporated in the mass of the sample bags, for those to resist it, whose living depend upon fraud, and that such has been the character of many in this line of business no one will deny. It is the standing of the manufacturer for honesty, at last, that gives character to his composition, for without this, no two years would give the like result from the use of his article, and as it is impossible to detect imposition, by any rude analysis upon our farms, the injury is done before detection takes place. But, sir, if through your journal you can induce the different agricultural societies, and leading farmers of your acquaintance to institute these and like inquiries, and publish tabular statements as answers, you will have effected more for the advancement of agriculture than by any other means with which I am acquainted. You will have overcome, in a few years, many of the difficulties under which we now labor; you will have driven from the market all that worthless trash, that has done such serious mischief to our interest, by publishing its feeble effect alongside of that which has doubled or trebled the natural products of the soil.—You will have guarded the unwary against the purchase of that which tends to his ruin, by calling his attention to another which will enrich him; you will have overcome the objections of the prejudiced by the statement, of such a farmer of known character, having put $70 00 in his pocket by the use of such a fertilizer, over $35 00 which his neighbor made on better soil, unaided by manures.

Farmers, even the most illiterate, are acute observers; they can't long resist the evidence of their senses, that neighbors so and so, are improving their farms and conditions in life, and they are quick to seize hold of any advantage; thus the better informed would impart in one way or another, the advantages they had gained from their experiments, and soon the improvement would become general. I can't help thinking if the Patent Office Report would turn its attention to the comparative effect of the different fertilizers, it would be rendering much more service to the country than the publication of opinions of private individuals.

Manuring the soil is the very basis of all agricultural improvement; increasing the products of the soil is a national as well as individual benefit—and any information imparted, whereby the fertility of the old worn out soils of the Atlantic States, can be renovated and brought back to their original, or increased productiveness, and that within the reach of the present owners, would be a general blessing.

In justice to the manufacturers of the Patapsco Guano, I call particular attention to the table, it will be seen that the relative value of this manure as compared with Peruvian, stands as 537 to 806—where equal quantities of each had been applied; if it had been my object to test the moneyed value of each—which it was not, having experience in the Patapsco, for the last four years, I should have applied 184 lbs. more of the Patapsco than the Peruvian, and if the increase in the yield had continued in the same ratio, the product of each would have been equal, with perhaps a greater benefit to the succeeding crop, where the Patapsco had been applied. I think I am warranted in coming to this conclusion from the data furnished in the table, as well as former experiments with the two fertilizers. And if so, the lessened demand for the Peruvian, which is every day growing more difficult to get, and which must ultimately give out, by the substitution of another compound equally beneficial, shall have no little weight among agriculturists as political economists.

It will also be observed by reference to the table, that the main object of the experiment has not been attained, a progessive increase between the application of 209 and of 430 lbs., leaves us still in doubt where the amount of application would cease to increase the yield in the same proportion. So long as the increase remained 125 lbs. to each cent

applied, it would be a profitable investment to raise an article worth double the value per pound of the fertilizer employed. I shall therefore, for my own satisfaction, continue the experiment the next season, if nothing occurs to prevent it. I intend pursuing the system more fully, and recommend the following plan to others :

Divide half an acre into 16 parcels, I shall then try Peruvian guano at the rate of 200 lbs., 400 lbs., 600 lbs., 800 lbs.—then Patapsco at the rate of 200 lbs., 400 lbs , 600 lbs., 800 lbs.—then stable manure at the rate of 20 loads, 40 loads, 60 loads, 80 loads per acre, then between each, nothing, nothing, nothing, nothing.

Others may have very different objects in view, and use other fertilizers, and still have the same general good effect upon the agricultural interest. My object being mainly to create a standard of comparison, and to discover the point at which the fertilizers give the smallest return to the outlay —or in other words the smallest amount of money after paying for the application.—The limits may even be beyond these figures, and it might be well to carry it to 1,000 or 1.200 lbs. as the market gardeners near Philadelphia use in their gardens; the latter amount with evident benefit, but so large an amount, looks out of all reason for a cotton farmer.

I am, with great respect,
Your obedient servant,
H. T. Guion.

HOUSE PLANTS IN WINTER.

The Buffalo *Express* gives some very useful directions appropriate to this season :

"The great obstacle to the health and beauty of house plants kept in living-rooms in winter is the dryness and heat of the atmosphere of such rooms. This is a difficult matter to provide for. Many who love to beautify their dwellings with these cheerful pots cannot afford the expense of Wardian cases and other elaborate devices for providing a separate atmosphere for their plants. A good substitute is made by setting the pots into a broad, shallow box, and filling the space between the pots with moss. Then lay over all a smooth coat of moss, covering every thing but the earth immediately around the plants in the pots. The moss should then be kept moderately damp. This arrangement not only adds much to the appearance of the plants—giving the effect of their growing directly from the bed of bright green moss—but the continual evaporation from the moss will impart a considerable degree of humidity to the air immediately surrounding the plants. If the box is lined with zinc, it adds very much to its durability. In adddition to any such arrangement the leaves of the plants should be frequently washed or syringed.

To protect plants from freezing nights, nothing is more simple and effectual than newspapers. A single thickness of newspaper folded around a tender plant is sufficient protection against a moderate degree of frost. The most convenient form for the paper is that of a conical cap. It is quickly slipped on at night and off in the morning.

WINTER EVERGREENS.

A lady who has tried the experiment says a beautiful and easily attained show of evergreens may be had by a very simple plan, which has been found to work remarkably well on a small scale. If geranium branches, taken from luxuriant and healthy trees just before winter sets in, be cut as for slips and immersed in soap-water, they will, after drooping a few days, shed their leaves and put forth new ones, and continue in the finest vigor all the winter. By placing a number of bottles thus filled in a flower-basket, with moss to conceal the bottles, a show of evergreens is easily secured for winter. All the different varieties of the plant being used, the various shapes and colors of the leaves blend into a beautiful effect. They require no fresh water.—*Horticulturist.*

RELIABLE YEAST.

Ten or a dozen common-sized potatoes, boil and mash them; boil a handful of hops in two quarts of water; scald a quart of flour; add the flour and potatoes together; put in one cup of sugar, one-half cup of ginger, and let it stand until cool enough not to scald; when light, put in a jug and cork it tightly, and set it in a cool place.

HORTICULTURAL DEPARTMENT.

Rev. J. B. CHESHIRE, D. D., - - Editor.

THE TEA PLANT.

There is an article in the *Carolina Farmer* of the 19th November, headed "Tea in North Carolina," which states that the tea plant has been growing in the State for 30 years—that it is a plant of prolific growth, requiring but one sowing broadcast, after which it sows itself. That the first crop from the seed yields the same season five pickings; that it grows from three to five feet high, a most hardy plant, flourishing in all soils and in all situations; that the limbs are so tough as to make paper or rope; that it is a diceduous plant, the leaves falling about November, and finally that its seed are so numerous that a small thimble full of them will sow an acre of ground.

Now there is not one single particular of this description which applies to the real tea plant. The plant described above is no doubt some foreign weed, which many years ago was distributed through this country by some one who may have thought it to be the tea plant, but who was utterly mistaken in the matter. I recollect distinctly that there was such a plant, distributed about for tea, but most persons soon found out the mistake. And the mistake ought to be corrected now, lest some persons should be deceived into cultivating this plant for the tea, and thus be discouraged from attempting the cultivation of the real article. To show that this is not the true tea plant, it will be enough to say that the tea plant is an evergreen shrub, growing fourteen or fifteen feet high, with rather large white flowers like a single camellia, the leaves are about two inches long and one broad; the limbs are full of twigs and not switches. The seed are as large as an ordinary sized acorn, and grow in a crop something like an acorn. The young plants do not attain more than the height of a few inches the first year, and leaves for tea cannot be gathered from them before the third year. I believe the cultivation of tea may be found profitable in this country, but if anybody expects the rapid growth and marvellous yield set forth in this article of the *Carolina Farmer*, he will be certainly disappointed. If the good lady who writes the account will send to me next spring I will give her plants of the genuine *Thea Viridis Chinenses*.

TREE HISTORIES.

With every new fruit or rare plant, comes a curious history. The Fuchsia was said to have been first discovered in an old cracked tea-pot, grown by a poor sailor's mother, whose son nursed a plant in the forecastle of his ship on the long voyage from South America. Rare Tulips have been in danger, during the mania, of being eaten in mistake for onions by careless sailors, who, notwithstanding the immense value of the bulbs, had the chance to lay their hands on the roots lying around looser than we should allow potatoes to do. We find scarcely an old tree anywhere, but it was either "planted" by General Washington; from the stone of a fruit eaten by Washington; or brought in somebody's saddle bags, hundreds of miles. "Riding switches," used on the horses of hundreds of lady travellers, have been stuck into the ground, and have made grape vines innumerable. Fruit trees without number—valuable seedings—come into existence in a semi-miraculous manner. Indeed, unless there is some sign or wonder exhibit-

ed at its birth, it is rare that any great excellencies are found. In one case, a bed of some hundreds of apple tree seedlings has every plant but one eaten off. The damaged plants push again. Singular to relate, they are eaten at the root by gophers, and this time totally destroyed; but the one left by the rabbits is still untouched. The owner struck by such a marvellous occurrence, dares not graft the wonderful escapement as he intended, but lets it grow up to the bearing state; and he is not surprised to find it "a head and shoulders" above anything heard of. The neighbors come together for miles, to see the new born prodigy, and unanimously crown it the "king of fruits."

Now all these things are vouched for by honorable men. We are not joking. Similar stories to these are implicitly believed by thousands of instances. We have had histories of things given to us by people whom we know are above untruth,—by people whom we are sure implicitly believe the stories they tell us,—and yet we are nearly sure in many cases their tales are without foundation, and some we are *certain* never occurred.

We have shown in a former volume of the *Gardener's Monthly*, that the accounts we have of the origin of the Bartlett Pear, must be apocryphal and we are continually in trouble with peoples' "undoubted facts" in the same way. Recently we went to some trouble to see a living tree of the Carolina Ash; the introduction of which tree into the owner's grounds from one specific tree of the right kind was so circumstantial, that we never had the slightest doubt of its authenticity; yet when in fruit, it was nothing but the common northern Ash, *Fraxinus acuminata*. The owner is now deceased; but on his authority, many strange facts have gone into the written history of trees; and even into European arboricultural standard works; and we have now no doubt are as inaccurate as this. Is there a natural law which decrees that not even memory shall live forever? Which in time so distorts things by some means of which philosophers have been unconscious, that we first begin to believe them false, then laugh at, and end by losing interest in and forgetting altogether? Is nature determined that we shall never know from whence we came, or whither we are going, and does she take this way to destroy the tracks man has made in his progress through eternal ages? For thousands of years has our race peopled this earth, and anthropology tells us that they were in most things as wise as we; yet their traces are lost, and "six thousand" is the most that the wisest can definitely suggest; and of this, only the history of yesterday finds much credence, and barely that. The older the history the less it is believed in, until as age by age advances, one by one of the farthest is lopped off by all but a few, and passes away. Even with these few it is freely granted that the oldest facts on record, are well nigh impossible; and this is true of science as of any branch of historical literature.

But whether there is or is not any way of accounting on philosophical principles. for these self-deceptive stories, there is no doubt of the fact that we should always receive all "facts" which may serve to build principles on with great caution. We are suffering every day from a false philosophy, because built on somebody's "facts" which ought not to have been credited; and in vegetable physiology and the kindred sciences, so many things are taught on just such authority, causing much infinite trouble in the every day practice of horticulture; that it behooves all writing of facts for our journal, to be particularly careful that they are not deceived themselves, and all who listen or read, not to credit too easily everything that is said. If it were not for the "systems" built on these supposed facts, it would be no matter.—*Gardener's Monthly.*

PRUNING.

My observation leads me to think that pruning, as generally done, does more harm than good. Everywhere I go I see trees ruined by pruning. In some cases large limbs are slashed out with an axe. If sawn, it is done in such a slovenly manner as to leave a wound that will not heal over in years, and most likely make the tree rotten-hearted. I have seen men go into the orchard and slash out two-thirds of the top of a large tree, without any definite idea of what they were doing—only a very crude idea that it ought to be pruned.

A man in a neighboring town gave a man fourteen dollars to prune his orchard. He had better have given twice that sum to have staid out. Great limbs cut off with stumps extending from three to six inches from the body—never to heal over. A coarse, rasping saw to tear the bark, with the limb allowed to fall and strip down the tree. The stump exposed with no protection from heat, cold, or rain. The balance of the tree interfered with so seriously that it soon becomes a prey to disease and insects, and some fine spring is found dead. Yet the owner congratulates himself that it was no fault of his, as he gave it to the best of care, even to pruning.

When will people learn that limbs should be taken from the tree with a smooth, clean cut, and so near to the parent stem that the sap wood will speedily cover over the wound? Every considerable wound should be covered with wax, varnish or paint, to keep out water and protect it while healing.

People who know nothing about pruning had better do little of it, except to keep the suckers clear around the root of the tree. Many a tree has been ruined in the Northwest by injuriously pruning out the top, and letting in the sun. The branches in this climate should be thick enough to protect one another and the body of a tree. Yet in this climate we have orchards that have been treated from time to time in this suicidal way, that have some trees that have lived through, and are now ten or twelve inches in diameter. But nine out of ten of the trees are dead. The remainder will follow, one by one, as their constitutional vigor is seriously impaired.—*L. L. Fairchild, in Country Gentleman.*

IGNORANCE IN PLANTING TREES.

The Aberdeen (Miss.) *Examiner*, in its notes on fruit culture in Mississippi, speaks as follows of the death of trees by starvation or wrong planting:

"In planting trees, the custom has been almost universal—and sanctioned, too, by the highest authority—to, first, dig deep holes down into the stiff clay or barren sand subsoil, as the case may be, and then fill in with soil that has been highly manured—sometimes with manure alone, and cover with soil—and then plant the tree in this highly enriched and thoroughly prepared soil, while the surrounding soil beyond the limits of these holes is left unmanured and uncultivated. Now, what is the consequence? If the subsoil be a stiff clay, the hole becomes a receptacle for water, which stands and stagnates to the bottom. The roots, at first, stimulated and nurtured by the rich soil, put forth fibres rapidly, and the tree starts into a sudden and rapid growth. But, as the roots descend, they soon come in contact with the stagnant water, which operates as a deadly poison to the roots. The poison is communicated to the tree, which soon sickens and dies. Nothing can be more certain than this result. A subsoil of poor barran sand is equally fatal, though from a different cause. So long as the roots can revel in the rich and highly prepared soil, the growth of the tree will be vigorous and healthy. But the roots are constantly extending in every

direction after food. In their progress, they soon pass through the manured soil, and strike the poor and unfertilized sand, and here they stop: they cannot penetrate a soil that is destitute of the elements necessary to their sustenance—they cannot travel without food. Food is what they are in search of; but reach which way they will in this barren soil, they find none. The tree, after having been highly fed and stimulated to an excessive growth, suddenly finds itself reduced to a state of starvation. Its growth suddenly stops, the leaves turn yellow, the tree drags out a sickly existence for a few years ,and then dies from starvation."—*Horticulturist.*

FLOWER GARDEN AND PLEASURE GROUND.

We do not know that any more suggestive theme could present itself at this season, than the thinning out of trees and shrubs. In planting new places; it is impossible to follow the advice of our best masters in Landscape Gardening, and plant only with a view to the future. It is well to imagine that we in planting are forming a picture for posterity to admire; but in our mere matter of fact, perhaps selfish time, people will want something to enjoy themselves, and *now*. Hence places will be set too thickly with trees to have a pleasant present look; and things will be put near roads, close, and indifferent to the clearly foreseen verdict of prosterity, that they are "entirely too near." Now as none of us expect to die soon, but all expect to enjoy in some degree in the future the works of our hands, why not keep both the present and future in view so as to reap some enjoyment from both? This is to be done by planting many more than we intend permanently to remain, and then cutting away annually those which we feel we can spare. This annual thinning and pruning in time becomes a very pleasant winter occupation. Nothing charms so much as variety; and by the axe and pruning knife, employed in this way, we have really a new place every year. It is hard at first to make up our mind to cut away handsome trees, that have taken so long to grow—the plantings of our own hands; but this nerve must be acquired, and it is surprising how after this victory over affection has been once achieved, how strong we feel for the good work. Sometimes we can leave trees remain longer than we might in places where they will be objectionable in time, by cutting back and trimming in. By the exercise of some judgment in cutting far back, out of sight, the strong shoots and leaving the twiggy ones to cover up the stumps left in pruning, the natural form of the tree is pretty well saved, and it may thus be preserved for years in a tolerably dwarf condition. In these cases, whether of deciduous trees or evergreens, the central or leading shoots particularly are the ones to be cut back, otherwise they will only grow stronger in proportion as the others are pruned, and really defeat the object in view.

Sometimes there is more anxiety about trimming and thinning out than necessary. Plants often group well together. Their branches interlacing, form a picture to be obtained in no other way. Friends are often troubled that one tree is spoiling another—no matter. The group is the charm. Some friends have no other idea than the beauty of single trees. Certainly they often afford the highest types of beauty. A grand old oak or chest-

nut with a century of life, its branches reaching far towards the horizon, and its bending branches, rivalling the cathedral arches of man, cannot possibly be excelled in emotional power; but on the other hand, the rich effects of massing can be as readily appreciated by the lovers of the beautiful.

This weakness for trees —grown up trees—is a foe to the highest art. In choosing a site for building it is a great chance if a piece of wood is not selected in preference to an open plain; and yet it is almost impossible to make anything artistic out of natural trees. It is very nice to have such a grove, for special purposes; but the great pleasure which true art gives, can never be realized from such materials. The single idea of *shade* usually decides this. It seems an age to wait to see "small trees grow." Few can realize how fast trees come forward in a deep and rich soil. Even in a deep soil only—soil loosened up two feet deep, and several feet wide, will in ten years give trees twenty feet high, though they may have been but four or five feet at planting. Oaks, even usually esteemed so low, will reach fully this in a deeply loosened soil, even though not a particle of manure be used. Indeed, when we see some of the work of our own hand with these very oaks, we wonder how the idea originated that oaks grow slow, Certainly oaks with a fair chance will beat horse chestnuts, Kentucky coffees, or some other trees.

Many kinds of trees that do not seem to thrive well, will be greatly improved next year by having a surface-dressing of manure or rich soil thrown about them. Evergreens are no exception. A singular notion used to prevail, that manure of any kind was injurious to evergreens, probably through noticing that they were usually found in poor, barren soil. Our best American coniferæ growers, however, have long practiced manuring them, and with the best results. Guano has been found particularly beneficial to the Spruce family, and it will probably be found as good for the whole family of evergreens.

Soil for flowers may also be looked up during the winter season. Very few understand that an occasional change of soil is very beneficial to flowers in beds, though all know how important it is to flowers in pots. There is nothing better than surface soil from an old pasture, taken off about two inches deep, and thrown into a heap with about one-sixth part old hotbed dung to partially decay. In addition to this "staple" item, smaller quantity of different matters should be gathered together for peculiar cases, or particular plants. Peat, for instance, will be found very useful for many kinds of plants. This is not as is often supposed, mere black sand; but a spongy, fibrous substance from the surface of bogs and boggy wastes. Sand should be collected sharp and clean; the washings from turnpike ditches are as good as any thing.—Leafmould is best got already well decayed from the woods. That one makes for himself from rotten leaves is seldom good for anything; it is always sour and seems "indigestible" to vegitation. A load or so of well-decayed cow manure is a good thing for the gardner to have by him, as all those plants that dislike our hot summers, and want a cool soil to grow in prefer it to any other manure. A small pile of hotbed manure is almost indispensable to the garden.—*Gardener's Monthly.*

THE FARMER'S FRIEND.

THORN'S COTTON PLANTER.

THIS PLANTER was invented in April last by T. T. & G. T THORNE of Edgecombe. It has given entire satisfaction to those who have used it, and will plant from a peck to six bushels per acre, by a simple and easy regulation of the wheel.

It opens the furrow, drops and covers the seed at the same time, to any required depth, and the seed require no preparation after leaving the gin. It is perfectly free and regular in its distribution, and never clogs. Runs very light, follows the ridge, and is easily handled, requiring little or no exertion from the horse or the holder.

We hope the planters of Edgecombe and adjoining counties will give our machine a trial. It will be manufactured at home, under our own supervision, of the best workmanship and material.

SAMPLE MACHINES

Will soon be on exhibition at Wilson, Rocky Mount, Greenville, Battleboro, Enfield and other places. A sample is now on exhibition at the store of Messrs. PENDER & JENKINS, Tarboro, who will take pleasure in showing the machine, and explaining its operations.

Persons desiring to test this Cotton Planter, can see it in operation on our farm at any time, where we have prepared ground expressly to exhibit it, or we will take the Planter to the farm of any one not too remote from us.

CERTIFICATE.

The following well known planters of Edgecombe planted their crops of last year with the "Farmer's Friend," obtained the best stand they ever had, and found their crop easier of cultivation from being so regularly planted.

EDGECOMBE COUNTY.

We, the undersigned, have used the "FARMERS' FRIEND," and find it superior to any we ever saw—giving entire satisfaction.

J. M. MAYO,
J. C. KNIGHT,
C. F. PITTMAN,
A. JONES.

PRICE, $20.

Planters of Edgecombe and adjoining counties wishing this machine, will apply to D. PENDER, Tarboro, N. C., or

T. T. & G. T. THORNE,
Whitaker's, N. C.

No.9-tf

Dr. J. A. Fuqua,

DENTIST,

Has returned to his

OFFICE IN THE EDGECOMBE HOUSE.

No.6-1y TARBORO, N. C.

Mr. and Mrs. Owens' School,

TARBORO, N. C.

The FIRST SESSION of the year begins with January and ends with May; the SECOND SESSION begins with June and ends in December.

VACATION—AUGUST AND SEPTEMBER.

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Shell Lime.

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1,000 BUSHELS SHELL LIME!

Price at kilns, 6 cents per bushel, slacked; 10 cents unslacked.

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SUPER - PHOSPHATE,

Equal to any in the market,

PRICE $52 PER TON.

REFINED POUDRETTE!

GROUND BONES,

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☞ Strict personal attention will be given to the receiving and shipping of all kinds of produce. No.1-1y

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The Grafton Mineral Paint Co. are now manufacturing the Best, Cheapest and most Durable Paint in use; two coats well put on, mixed with pure Linseed Oil will last 10 or 15 years; it is of a light brown or beautiful chocolate color, and can be changed to green, lead, stone, drab, olive or cream, to suit the taste of the consumer. It is valuable for Houses, Barns, Fences, Carriage and Car Makers, Pails and Woodenware, Agricultural Implements, Canal Boats, Vessels and Ships' Bottoms, Canvas, Metal and Shingle Roofs (it being Fire and Water Proof,) Floor Oil Cloths (one Manufacturer having used 5,000 bbls. the past year,) and as a paint for any purpose, is unsurpassed for body, durability, elasticity and adhesiveness. Price $6 per bbl. of 300 lbs., which will supply a farmer for years to come. Warranted in all cases as above. Send for a circular which gives full particulars. None genuine unless branded in a trade mark, Grafton Mineral Paint. Persons can order the Paint and remit the money on receipt of the goods. Address

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THIS HOUSE DOES STRICTLY A

COMMISSION BUSINESS.

IT NEVER HAS NOR NEVER WILL DEPART FROM THIS PRINCIPLE.

From the fact that Norfolk is now in steam communication with Liverpool, and from the high prices obtained for produce in its markets during the past two years is sufficient evidence, we think, to satisfy the producer as to where his interest lies. It is a duty we owe ourselves to build up our Southern seaports; but it can never be done so long as the farmer continues to ship his cotton to the North. No. 1-1

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The Spring Term of 1870 opens January 12th.

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We manufacture Carts and Wagons to order, and every kind of Agricultural Implement suited to the cultivation of Eastern and Middle Carolina.

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We have secured the services of Mr. C. C. LANIER, of Tarboro, who will represent us in the Eastern counties of Carolina.

Reliable and responsible farmers will be aided by advances of fertilizers and farm supplies generally, at lowest market prices.

We attend to the purchase and shipment of any article wanted by our friends in the country.

Our agent, Mr Lanier, may be addressed or applied to in person at Tarboro.

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79. 81 & 83 SYCAMORE STREET,

PETERSBURG, VA.

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FRANK POTTS,
S. S. BRIDGERS,
E. GRAHAM. nov 13

DISSOLUTION OF CO-PARTNERSHIP.

THE FIRM of Donnans & Johnson has been dissolved by mutual consent. Either partner will sign in liquidation.

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S. C. DONNAN,
J. A. JOHNSTON.

The undersigned will continue the Grocery and Commission Business at the old stand, No. 109 and 111 Sycamore street, under the firm of

JOHN DONNAN & CO.,

Having had many years experience in the Grocery and Commission Business, respectfully offer you their services in the sale of any Produce you may ship to this market.

JNO. DONNAN.
nov 13—1y J. A. JOHNSTON.

COCKADE MARBLE WORKS,

CORNER SYCAMORE AND FRANKLIN STS.,

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MONUMENTS, CENOTAPHS HEAD AND FOOT STONES, AND GRAVE STONES

of every description, and of

FINEST MARBLE AND SUPERIOR WORKMANSHIP,

always on hand and made to order

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SATISFACTION GUARANTEED.

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VALUABLE LANDS

FOR SALE IN

Lenoir & Craven Counties.

The large and valuable plantation known as

PALMYRA,

Two and a half miles from La Grange, (late Moseley Hall) on the Atlantic and North Carolina Rail-Road, sometimes called the Nathan Howard farm, is for sale. The tract contains fourteen hundred and forty (1440) acres, one half cleared and under cultivation, with good buildings for farm hands, overseers, barns, stables, gin-house, cotton press, &c.

These lands are remarkably well adapted to growing cotton, corn, oats, and other small grain. The uncleared land is susceptible of the most thorough drainage and cultivation.

This is one of the best and most eligible farms in Lenoir county, has readily yielded for one third of everything produced, and will yield, under favorable seasons and fair cultivation, about four thousand ($4,000) dollars income from rents.

Also, another farm in Craven county, called

TURKEY TRAPS,

Within five miles of the Atlantic Rail-Road, two miles from Dover river, (navigable), sixteen miles below Kinston, and fifteen miles above New Berne, adjoining the lands of Dr. R. L. Cobb and others.

The tract contains one thousand acres, of which a four horse farm is cleared and under cultivation, and as much more ditched and partially cleared.

MARL

Is found in great abundance on these lands, being thrown up out of the ditches three feet from the surface.

This is a valuable tract of land, and will be sold for much less than its assessed value, the owner having more land than he can manage under the changed system of labor.

For further particulars apply to or address

WILLIAM A. BLOUNT,

Attorney at Law, N. C.

Or Dr. [illegible] Kinston, Lenoir County, N. C.

DANCY & LAWRENCE,

Gullett Steel Brush Cotton

Edgecombe, Halifax, Martin, Pitt, Wilson and

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THE

RECONSTRUCTED FARMER;

DEVOTED TO

THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN, }
JOHN S. DANCY, } - - - - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment" Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

VOL. 1.] TARBORO, N. C., FEBRUARY, 1870. [No. 10.

CORN AND ITS CULTURE.

ADDRESS OF JOSEPH B. WALKER.

He said it had been for a long time a disputed question whether the plant *Tea Mays*, popularly known as Maize or Indian Corn, is indigenous to this hemisphere or to the other. A question, which, upon examination, shows an array of authorities in support of either side of it, utterly appalling to a plain New Hampshire farmer.

While this question had never been definitely settled, the weight of evidence indicates that Europe and Asia received this plant from America. It has been found growing wild in all parts of our continent, adapted to its production, from Oregon to Paraguay. Indeed, there is abundant reason to believe that it was cultivated by the aborigines for centuries, and perhaps tens of centuries, before the first European foot had pressed American soil. The palace gardens of the Incas were ornamented with beautiful representations of it in gold and silver, and Columbus found it in a state of cultivation by the natives of Cuba in 1492.

With them and the Ojibiway Indians its cultivation was generally assumed by the females. It seems to have been a "woman's right," claimed by them in consideration of the hardships of war and of the hunt borne by the other sex. Her store of its golden grain was as much a source of pride and satisfaction to a worthy squaw, as her spotless table, loaded with choicest viands, to a faultless housekeeper of our own times.

The first corn crop raised in this country by European colonists was planted upon the banks of the James River, in Virginia, in 1608, the year immediately following that of the Jamestown settlement. When, a little later, our Pilgrim fathers came to Plymouth, they found considerable stores of this grain, concealed by the Indians in the ground, not far from the place of their landing. The very next year, 1621, guided by instructions received from the natives, they planted the first corn field ever planted by civilized men in New England. But whether the old world or the new can boast the origin of this plant is of little consequence to me.—

It came to our ancestors from the Indian; to them a richer gift by far than countless gems of gold, for they needed not those. Bread to sustain them they wanted, and land on which to found an empire, and these the Indian gave.

The speaker proceeded to treat of the botanical branch of his theme.

In North America corn flourishes throughout a range from north to south of forty degrees, and of twenty-three degrees in the United States alone; being raised successfully all the way from Canada to Mexico, and inside the tropics, from the level of the sea to a height of seven thousand feet above it.

Indian corn is very flexible in its nature, and readily accommodates itself to surrounding circumstances.—No courtier or politician is more so; but while it equals him in general flexibility, it possesses some fixed principles which are immovable under any and all circumstances. Each considerable locality soon modifies any new variety introduced to it, and imparts to it a character adapted to its soil and climate. To illustrate this fact Mr. Walker said that some years since he procured from the town of Georgia, in Vermont, a variety of yellow pop corn. The ears were very tiny, many of them being not more than an inch and a half or two inches long. A few years' cultivation upon the interval at Concord, enlarged them to three times their original size, and clearly demonstrated that such culture for a few years more would have changed this to a respectable variety of field corn.

The varieties of corn are more numerous than is generally supposed, no less than one hundred and twenty having been found, it is said, in Spain alone. As many perhaps exist in the United States within the limits of New England alone. The ears of different varieties vary in length from one to eighteen inches, and in diameter from the half of one to more than two inches. Some kinds have eight rows of kernels to the ear, some ten and twelve, and some more, even to the number of thirty-six. At our old fashionod New England huskings a chance ear of the red variety was highly prized by the sterner sex, and that more particularly on account of the privilege attaching to it than for any intrinsic superiority of quality it might possess. I hardly dare say it was an unpopular kind with the fairer portion of such parties. Some varieties are particularly rich in oil and gluten; others in starch; some in fat producing properties, and others in such as favor the production of flesh and bone.

Different varieties require different periods of time in which to mature. Those common with us require from eighty to one hundred and fifty days. Our corn season is flanked by a frost at each end, and at the longest, generally extends only from about the first of May to the middle of October, while in many localities this period is considerably abridged. It is useless to rely upon kinds which require for their ripening more than one hundred and fifty days.

And it is equally useless to plant when the ground is cold. Corn requires for germination a higher temperature of the soil than rye, wheat, grass, or in fact most of our other crops. Not until this has risen to

about sixty-eight degrees for some considerable portion of the time will the kernel sprout and grow. The old Indian rule of planting when the leaves of the birch had attained the size of a mouse's ear, was doubtless founded upon experience and was a good one. The expanding leaves of the trees afford a far better guide than those of the almanac. It is far safer to regard their condition than the day of the month. Some corn land in the valley of the Merimack favorably situated, may generally be planted as early as the first of May. For most of it, however, the middle of that month is early enough, while upon the colder lands of the hills most of the planting should be done later by a week or ten days than that.

If planted at the proper time, corn will germinate and come up in from five to eight days, varying somewhat according to the warmth of the soil and the depth to which it is planted.

Indian corn loves best a deep, rich, warm, mellow soil, with a southern exposure. If sheltered upon the north, so much the better, as it will oftentimes secure to the crop a week or ten days of good corn weather, both in the spring and autumn. The lengthening of the ordinary corn season from two to three weeks by shelter, the selection of proper soil and other appliances is a matter of great consequence, and one which demands the careful consideration of the corn growers in so cold a latitude as that of New Hampshire. Indeed, there is no one point in corn husbandry more worthy of emphasis than this, viz:—*Raise corn on corn land.* He had no doubt it could be produced upon a bog, by a little ridging to keep it from drowning, but we need not say with what success.

The manures at our command best adapted, all things considered, to the growth of corn, are those of the barn and the stable. Of three kinds of superphosphate tested on his farm in 1867, in connection with corn, upon land fertilized by no other dressing, one was found to be entirely worthless, and the corn dependent upon it a failure. If the others had been applied at the rate of two or three tablespoonfulls to the hill, they would have probably secured a fair but moderate yield.

The office of a fertilizer was to afford sustenance to the growing crop, and assist in breaking down and converting to an assimilative state, the insoluble silicates of the soil. The food for the plant's support should be evenly distributed over the whole piece, instead of being confined merely to its hills; and a thorough pulverization of the fertilizer applied are of much importance. The careless spreading of coarse, lumpy manure upon land devoted to corn will be very likely to produce a late and uneven growth, liable to encounter frosts long before it is able to bear them.

This crop is liable to a number of accidents, each more or less serious in its results.

Frosts will not unfrequently assail it when but a few days out of the ground.

The crow and black bird are vexatious meddlers with this crop, particularly in the early period of its growth.

For a month or so after planting, the wire worm and the cut-worm are often troublesome. The former gen-

erally frequents cold and wet lands, and their ravages may often be escaped by planting on soils of the opposite character. Whenever ravages of the latter are apparent, the only remedy is at once to unearth and destroy them. and it will be found profitable to do this even repeatedly, if occasion requires it.

Considerable injury to a corn crop not unfrequently results from winds, particularly when the corn has been growing rapidly and is tender. It is most exposed to this injury when planted in long strips, running in such directions as to expose a broad side to the blasts.

At harvest it is often found that many of the ears are but imperfectly filled at the tips, an inch or two of the cob being destitute of kernels.—Various causes of this have been suggested. But whatever the true cause may be, the most practicable remedy for the evil will be found in a careful selection of soil and thorough culture.

We can hardly overestimate the importance of careful and frequent stirrings of the ground by the cultivator and the hoe, for the first four or five weeks after planting, whereby air and moisture are admitted to the roots and the robberies of rank growing weeds prevented. After the first of July, however, the crop must be left to itself, and the proprietor has simply to await the result in autumn.

A reference to his farm record revealed the fact that eight crops, raised from 1852 to 1861, measured in the bins immediately after harvest, allowing two bushels of ears to one of shelled corn, yielded as follows, viz: 1853, 60 bushels per acre; 1854, 50; 1855, 60⅝; 1857, 71½; 1858, 64; 1859, 50½; 1860, 43½; 1861, 73; being an average yield per acre for this period of fifty-nine and one-eighth bushels.

He considered fifty bushels to the acre of good, sound, dry corn, as satisfactory. The kinds of corn usually planted by the farmers of this State are the eight and twelve rowed varieties, and the present exhibition of those at the State House, collected from all parts of the commonwealth, affords gratifying evidence that these are being produced in much perfection.

Their improvements however is practicable and desirable. Could the tapering of the ears, in the case of many of them, from the middle towards the tips, be lessened one-half, the kernels would be latitudinally enlarged and the crop correspondingly increased. An important improvement would also be gained by securing a large number of ears upon a stalk, which would result doubtless in a great augmentation of yield without a corresponding enlargement of the cost of culture. Mr. Flint, in his admirable treatise on Indian corn, cites experiments made by Mr. Thos. Bayden, of Maryland, who, beginning with the common Virginia corn, having hardly two ears to a stalk, succeeded, after a trial of more than twenty years, in so improving this variety that many of the stalks produced four, and some ten ears. If our common eight rowed corn, which bears but one or two ears to a stalk, or our Dutton which bears but one, could be made to produce four and two, respectively, the corn crop of this State would be doubled.

But is corn growing and unprofitable business in New Hampshire? Northern corn is quoted in the market at about one dollar and a half a bushel. What does it cost to raise it? This question will doubtless elicit different answers. I was told some twelve or fifteen years ago, by a farmer of much intelligence and long experience, that its cost was a dollar a bushel. Another, about the same time demonstrated by a written statement, at an annual meeting of this society, that he had, that very year, raised it for twelve and a half cents. A careful preservation of all the items of expense of a crop raised in 1861, showed me conclusively that my corn that year cost me about fifty cents.

If we can raise this grain at seventy-five cents a bushel, and sell it for about twice that sum, is it not a paying crop? What other field crops pay a larger net profit per acre, than thirty-three dollars and ninety-four cents?

The value of our Indian corn crop is not generally appreciated. It is the most important of any grain grown in the country.

As an article of food it is of very great value. Fifty-two pounds of Indian corn is equal to seventy-one of oats, fifty-five of rye, fifty-two of wheat, and one hundred of good English hay. For fattening purposes it is doubtless the most valuable of all our cereals.

Mr. Walker said: New Hampshire raised less corn in 1860 than in 1840, and in order to make good the deficiency in her own crop something like a million bushels were annually imported. By a judicious selection of the better varieties and more careful cultivation, they might supply the whole demand of the State without materially increasing the area now devoted to it. But a varied industry was best adapted to advance the social interests of the people. Although they had a stern climate and rocky soil, under skillful culture the latter might be made productive, while hundreds of waterfalls incited to other labors than those of the farm. God had designed them for a manufacturing as well as an agricultural people and linked together those two quiet industries in amicable union. If we appreciated and improved the advantages His liberal hand vouch-safed them, their fields will become mines of wealth and the Manchesters upon our rivers rival in riches, in population and power their old namesakes in the fatherland beyond the sea; and this fair city, with its hundreds of thousands of busy people, will stretch out its hands and invite to its markets the products of a surrounding country, grown richer far and more beautiful than the environs of old Damascus or imperial Rome.—*Mass. Ploughman.*

CALIFORNIA WHEAT.

The first California wheat brought in any considerable quantity to Philadelphia came to us two years ago.—It was a novelty that our millers admired, but were reluctant to take hold of. The grains were beautiful to look at—yellow in husk—but within, white as the powder of oriental pearls. It was flinty in consistence, and the millers found that the burr-stones set for Pennsylvania and Ohio wheat, failed to reduce it to the condition essential to the production of a super-

fine flour. One firm of Philadelphia millers, celebrated for making a superior article of family flour, had used a small lot of it six or seven years previous, and understood the nature of the grain and the manner of grinding it, and also knew how handsome an article of flour could be made from it. They at once bought heavily, and the flour made from that wheat became celebrated throughout the city. Their success caused others to try the wheat, which is now looked on as indispensable for making superior flour. It is a curious circumstance that every one who has been in the habit of eating the bread made from it cannot with any satisfaction relish bread made from any other kind of wheat. The bread has a peculiar rich golden white hue, is moist in its nature, and with such richness of flavor that it is difficult to persuade those who eat it that sugar has not been used in making up the bread.

When this wheat first arrived here the Eastern ports were so bare of good white wheat, and even good winter red, that it was impossible for our fancy millers to make a superior barrel of flour. Prime red wheat cannot be had, and white wheat is equally scarce, and no miller, unless he uses California wheat, can turn out an article so satisfactory as that in which there is an admixture of the California product. At first it was so difficult to find any miller who could properly grind this, that the offer of an intelligent Jersey miller to undertake the task was gratefully accepted.—Messrs. Detweiler & Hartranft, of the Quaker City mills, in Kensington, took it up, and since then have ground no other grain. A cargo of 40,000 bushels was lately taken by Mr. Wm. B. Thomas, who is now making the whole of it into flour.

The product of the grain is very beautiful. It is as white as arrow-root, while chemical analysis of the farina shows that immediately beneath its hull is a rich deposit of phosphatic matter, in which our own wheat is said to be deteriorating year by year. With a large supply of wheat from California our own wheat lands may perhaps be permitted to rest until by a judicious rotation of crops the fertilizing qualities of virgin soil may in some manner be restored to them.—*Commercial.*

DAIRIES AND CHEESE MAKING IN WESTERN N. C.

A paper read before the North Carolina Agricultural Society, at the annual fair, 1869, by N. W. Woodfin, Esq., of Buncombe:

To the president and members of the North Carolina Agricultural Society:

Gentlemen: At your request I have hastily prepared a few statements of fact to prove the adaptation of Western North Carolina to the dairy business.

If climate, soil and water are all favorable to this branch of agriculture, then the case is made out. I take it that all must turn on these three requisites.

1st climate: While we may improve the soil, and make it what we desire it to be, the climate is beyond our control and we are to conform our crops to suit the climate; we cannot change it.

It is well ascertained that in the warmest portions of the South, this business is impossible, because: 1st.

The cattle are unhealthy, being subject to many diseases, from which they are entirely exempt in Western North Carolina. 2nd The food suitable for cattle [the grasses] do not succeed far South. 3d. The flies and other insects annoy them so as to prevent them from thriving.

I take it for granted that if the mercury ranges over 100 degrees in the shade, a considerable portion of the day, and above 80 degrees at night, the cattle will not be thrifty. But suppose this difficulty out of the way, the milk, under such circumstances, cannot be kept sweet without the use of ice. In Western North Carolina we have all that can be desired in the climate. The dairymen desire to keep the temperature of the milk below 62 degrees. As soon as possible after taken from the cow it must be cooled down to 60 degrees or at any rate to 62 degrees; this is easily done in Western North Carolina, as in the morning and evening when milking is performed, the temperature is little above and sometimes below that point even in summer.

So we find the milk is cooling on its way to the factory, and there it is immediately placed in contact with the coldest water, so as to cool it and allow the animal flavor to escape.

But it is not only necessary to avoid extreme heat; but extreme cold climates are almost as troublesome. The cattle must be closely housed and fed abundantly to sustain life; and to enable them to yield much milk the feeding must be expensive.

Then the manufacture and cure of cheese becomes very inconvenient in freezing weather. In this section of country we have little difficulty in this respect. We find it necessary to house cattle, probably about three months in the year on an average; and with properly arranged pastures, need not feel much except for about four months. In the best dairy countries in the North and East, they must house closely and feed abundantly, six months in the year; and yet in summer their climate is hotter than ours by 10 or 15 degrees. We are subject to neither, extreme of heat or cold. In the country on the Blue Ridge and West of it in this State the mercury rarely ever rises above 85 degrees, and is only occasionally above 82 degrees, and that only for a few hours during the day. The nights are generally as cool as desirable for any purpose of the dairy men. I am not prepared to say how far down the country this branch of business may be relied on, but suppose it may succeed as far East as the Yadkin, and in the hill country even East of that, as in Randolph.

Our winters are not less favorable than the summers. It is rare that we have the mercury range as low as zero, and never more than three or five degrees below. A comparison between this and other sections as well in winter as summer, may not be unprofitable in considering this branch of the subject. This I will do by copying a portion of an article prepared by Dr. H. B. Gatchell, which, though written with a different purpose, throws much light on this subject.

That the reader may judge of the merits of the climate of Asheville, I offer the following comparison be-

tween that and Dijon, in the Valley of the Rhone, East France. It will be seen that the two places differ less in climate than any one place often does in two successive years :

Places.	Jan.	Feb.	Mch.	April.	May.	June.
Asheville,	36.5	38.7	46.1	54.5	62.3	69.7
Dijon,	33.6	36.7	48.2	51.1	60.6	66.0

Places.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Asheville,	73.2	90.9	65 5	54.4	45.0	38.3
Dijon,	75.2	72.5	62.4	53.8	45.7	35.8

The climate of the United States, except a narrow belt near the Pacific, and especially that of the country between the Rocky Mountains and the Atlantic is a climate of extremes.—Western North Carolina is less subject to extremes than most of this area. The mercury seldom rises above 82 degrees. The greatest height in the four summers of which we have a record being 87 degrees. The extreme heat but little exceeds that of Mackinac, famed for the coolness of its summers, though there is a much greater number of warm days than at Mackinac. But the coolness of the nights is such after the warm days as to require a blanket; the cold very rarely reaches zero, and the snow seldom lies on the ground more than a few hours at a time. The mean summer temperature is that of Connecticut, on the shores of the sound, but with no single extreme of heat as great as in Connecticut, and while it is but one degree greater than that of St. Paul, its extreme heat is from 12 to 15 degrees less. The mean winter temperature [22 degrees above that of St. Paul, with an extreme cold from 40 to 50 degrees less] is about four degrees above that of Southwestern Missouri. It is that of Southern Kentucky and Northern Arkansas, but with no extreme of cold so great as the latter.

Soil.—Having found the climate all that we could desire, I come now to consider the soil.

That we have the soil combined with the climate, well suited for grazing, no one at all acquainted with the country will deny. It may be doubted if any considerable portion of the Western counties will fail to produce fair pasturage, if taken fresh and before the grain growing and shallow plowing, so common in this section, have exhausted its fertility. I know little land in this section that will not do in grass if sown after one or two years' cultivation. Indeed we have few old fields that do not readily take in grass and clover with the least top dressing, and especially after subsoiling. This by the way, is our only cheap and sure mode of renovating our exhausted lands. I have never failed of success in such a case and at greatly less cost and less of time than I had calculated. I have been speaking of our worst soils while largely the majority of our lands are vastly better and hold out inducements on every hand to sow down our best low grounds in timothy, or in timothy with orchard grass or clover.

These lands will yield from one to two tons of dry hay to the acre, without manure; and with it, will give three tons and in favorable seasons more. Col. Cuthey, in Haywood county some years ago cut over four tons. Mr. W. H. Smith, in the present season, cut over four

tons on an acre. On such meadows the after growth is most valuable, I suppose worth more than the expense of harvesting the crop. Next in value to these lands I reckon the rich mountains. The coves, and often the ridges to their summits are as rich as the best low lands, with a climate even more favorable for cattle. These lands I regard as the best pastures for cattle or any other stock, always well watered and exempt from the annoyance of flies. My mountain grazing farm is probably 3,000 feet above tide water. I have had live stock of all kinds on it since the year 1856, and have never yet seen one of the small yellow flies that annoy horses, cattle and other stock in most localities.

On this farm the Elk Mountain cheese factory was established in 1868, the first in the South as far as I know. We have one other on the same mountain and one on Swannanoa, six miles distant, with a prospect of half-dozen more in Buncombe by next season. Capt. David Edwards, of Oneida county, New York, who was highly recommended to me by Gov. Seymour, and who had for four years superintended the "Deerfield cheese factory," near Utica, at which the milk from the Governor's farms had all been manufactured, established, and for two years managed the Elk Mountain factory, and bears testimony to our superior advantages in climate, soil and water. He brought with him among others, Mr. Haddon, an Englishman of great experience in dairying and cattle raising; and they concur in the opinion, that our climate and soil are admirably suited to the grasses as well as the root crops so important for cattle in winter.

On the 27th of January, 1868, Captain Edwards rode with me through my pastures and saw my cattle yet living on the grass, without other feed, and pronounced them in better condition than theirs in central New York, which had been for two months in close feeding in stables. He and Mr. Haddon yet concur in the opinion that we can winter cattle on one half that is required in Oneida county, New York, and that we can raise all the necessary food at much less expense. Two years ago I spent three months in the North and East, looking closely into this subject and found no unmanured pastures at all equal to the one I left at home; this opinion was confirmed by Prof. Kerr, who had, with Gen. Vance, ridden through my pastures, the same season, and afterwards spent a month North and East, without finding a pasture equal to it. This pasture is made on land for which my brother and I had paid two dollars per acre in 1856, not cleared.

On these lands we had kept cattle, horses and mules for seven years, without shelter and without any food except what they procured from pastures for twelve calendar months in each year, except for a few weeks in one winter. The horse I now ride was never fed till brought into use, and so of the last mules sold from these pastures. These grounds, five miles North of Asheville, are not superior to much of our mountain country, and not equal to much of the mountain lands of Mitchell, Yancey, Ashe, Madison, Haywood and other

counties bordering on Tennessee and Virginia.

All the grains grow well on our best lands, and finely when manured, and especially if sub-soiled, but as little grain is required for dairy cattle (except for a few weeks when coming in) I have not devoted any space to the culture of grains.

The grasses grow verywhere unless prevented by bad farming or the growth of brush, and the longer the land is kept in grass the better it thrives, and the more cattle it will bear. Thus we save much expense for labor which is now so difficult to obtain and we save the exhaustion of our lands which is sure to attend a succession of grain crops. It is fair to say that two acres of good pasture grass will carry one cow through the grazing season, and one acre in hay and roots will winter her. Three acres being the space generally allowed to each grown cow. I prefer, however, to allow that quantity for summer grazing, and one acre in addition for winter feeding, which will be more than sufficient except in an extraordinary year of drouth.

Our dry season generally occurs about July and August, just at the time to interfere with the filling of the corn while the hay crop is harvested before this dry season, and though the drouth injuries the pasturing for a short time, the grass will spring up on the return of the fall rains, and often keep up good grazing till Christmas.

If you allow four acres of ground for each grown cow, and if you pay two dollars per acre in the wild state or ten dollars per acre set to grass, you'll have forty dollars invested, and if you pay forty dollars for a good milch cow you have eighty dollars invested for each cow. This sum at ten per cent leaves eight dollars annual interest, and if it cost twelve dollars to prepare the food and attend to the winter feeding, you have twenty dollars per annum, and if the milking cost ten dollars we have the entire cost of thirty dollars, the annual expense of each cow—this will be over the actual cost unless she gives milk in winter, and in that case the milk will meet the additional expense. A good dairy cow will give two gallons per day for 200 days or for the season, will give 400 gallons of milk, which will make 400 pounds of dry cheese of fine quality, not skimmed, as most of the northern cheese is, and worth with us twenty cents per pound or eighty dollars gross. Fine cows will yield five hundred pounds of cheese per annum, while extraordinary ones, will give six hundred pounds. No cow should be kept for the dairy that will not pay from forty dollars to fifty dollars net. We can make cheese at less cost per pound than beef, while it brings four times as much.

I suppose we have some six or seven millions acres of land, suited to this business and probably as much as four millions of good quality.

I say there is now in a state of nature, rich grass producing country in Western North Carolina enough to raise all the beef and mutton, butter and cheese that the entire South will require in all time, allowing us to ship abroad more than half the cheese which may be made. I do not say that our soil is equal to that of Kentucky, or some other sections of the

West—but they want our climate and water; we may not have a better summer climate, than portions of New England, but our winters are greatly milder and our soil is generally better, while our lands do not cost one tenth of the price. Our highest mountains including the Black, are generally covered with a dark and rich soil and luxurious growth, while theirs, and especially the White Mountains, are generally barren and the summit consists of uncovered rock.—I need not labor to prove that this broken country abounds in springs of the coldest water, generally ranging from 48 to 54 degrees and 45 degrees, whilst 60 to 62 degrees is all that is necessary to keep every thing sweet. We require no ice, while in central New York it is used extensively from necessity.

Mr. President, if I am correct in these statements, and I think they cannot be questioned, it will be seen that any one desiring to make an investment and to engage in the dairy business, can find no portion of the United States in which the same amount of capital will pay him as much as in Western North Carolina.

Much of the lands devoted to dairying in central New York cost from $100 to $150 per acre, and those on the Hudson and Connecticut rivers cost much more, while little of the land that I am describing would cost $10 per acre, and much of it can be bought at half that price even when set to grass.

IMMIGRATION.

Just at this time, when our agricultural interests are suffering for want of an adequate supply of steady, industrious laborers, and when we need thousands of stout-armed, clear-headed foreigners, brawny day-laborers and skilled artisans, factory operatives and miners, to aid in the great work of bringing to light the mineral wealth that lies hidden in our hills—we think it is a favorable occasion for presenting to our readers some interesting statistics, compiled from official returns, concerning the great inflow of emigrants to this country.

Previous to 1816, the emigration to the United States from all sources did not for many years exceed four thousand per annum, and it was not until 1816—17 when the pressure of famine in many places throughout Europe, and the harrowing fear of starvation, induced a great many of the poorer classes there, who could raise passage money, to seek our shores. The tide of emigration that set in then, has continued to flow hither in a constant stream. The number that came from the United Kingdom in 1826, was 7,700; in 1827 it was 11,952; in 1828 it was 17,840; in 1829 it was 10,954, and in 1830 it was reduced to 3,870. The emigration from Ireland from 1845 to 1857 inclusive, reached an aggregate of 1,512,100; and during the same period, the number frem Germany amounted to 1,226,394. From May 5th, 1847, to January 1st, 1859, the whole number of emigrants arriving in New York, was 4,038,991. In the latter year 250,000 emigrants landed in New York, bringing with them a cash capital of $37,500,000. This is a significant statement, for it shows that many of the foreigners who came

to our country, are desirable accessions, not alone because they are sober, industrious and economical, but because they bring the means accumulated in their native country by the exercise of the qualities enumerated, to buy land, which, under the care and attention they bestow, will soon treble its value.

The wonderful increase in our population for the two last decades, has been due to this emigration. The annual increase in our population by the excess of births over deaths, is about 1,38 per cent., or a little more than 11 per cent. for each decade.—The actual increase from 1840 to 1850 as shown by the census, was 35,87 per cent., and 35,59 from 1850 to 1860. It was annually more than 3 per cent., during both of these decades, showing about two-thirds of the increase in population has been due to emigration.

In a paper read before the American Association, by a Mr. Kapp, on the Growth and Value of Immigration, he lays down the rule, that "an emigrant is worth just as much to this country, as it costs to produce a native born laborer of the same average ability." This perhaps, is as fair as any rule that can be given. The cost of an American farmer or skilled laborer for the first fifteen years of his life, is estimated at about $1,500, and that of a female of the same age, about $750. Then if the emigrants be, say half males and half females, the average personal value of each to this country is equal to $1,125, by saving on the cost of living for the first fifteen years, in the case of all above this age, which includes five-sixths of the whole number. The cash capital brought with each emigrant wtll average $150, which being added to the previous average, gives $1,275 as the value of each one above fifteen years. It will not require any great skill to determine that the increase in our national wealth from this important source, must be immense.

We need thousands of them, of every nationality, Irish, German, Swedes, Norwegian and others.—There are profitable, permanent situations, for all reliable industrious, wealth producing workers. Our geographical position, climate and fertile soil, invite them, and we will hail the dawn of a new and glorious era of prosperity for our loved State, when these sturdy emigrants come here for employment and homes.—*Farmers Home Journal.*

CHARCOAL FOR HORSES' WIND.

"Many years ago, I recollect," says a correspondent of a London paper, "a horse being brought into the yard of Joseph Bignal, a celebrated man for keeping hunters at Croyden. The horse was very much affected in the wind and could hardly move, from distress. In a few days this animal did its regular work as a hunter with perfect ease and comfort to itself. Tar water was the cure. Tar is carbon, and charcoal is also carbon; charcoal in the powder is more easily given than tar water. I have tried it with the most beneficial effect, and I think it stands to reason that the removal of noxious gases and flatulence from the stomach of the horse must improve his wind and condition. Tar is frequently given with benefit in cases of chronic disease of the respiratory organs; but its effects are totally different from those produced by charcoal—carbon."

THE
Reconstructed Farmer.

JAMES R. THIGPEN, }
JOHN S. DANCY, } Editors and Proprietors.
WM. A. HEARNE, - - Managing Editor.

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WILSON, N. C., Dec. 29th, 1869.

Mr. Jas. R. Thigpen:

My Dear Sir: I address you this line to ascertain your views as to the practicability of making an efficient tile of green pine poles, boxed out by machinery, say two feet in length. Will the water find ready access at the junction of the different pieces?

A friend of mine requests me to make the above enquiry of you.

I am, very respectfully,

JAS. S. WOODARD.

In reply, we say we see no reason why tiles made of green poles of any description, should not prove efficient if laid down properly where there is perpetual moisture.

Neither can we show cause why the water should not enter at the junction, as well as if made of brick. We are of opinion that if the tiles are dry, they will not answer but a short time as they will soon decay.

Neither the green or dry will last where they are not all the time wet. Admitting that these would last longer than we would suppose under the most unfavorable circumstances, would it not be more economical to manufacture brick instead of wood tiles?

We are of opinion, that tiles made well of brick would be cheaper, since there is every facility in Wilson to make one that there is to make the other.

It would be necessary to have every pole of the same size to make the tiles, or there would be great irregularity in laying them, which would not answer. We invite our friend to one fact, that labor is cheaper and fuel more abundant than at the North, and if he will go regularly into manufacturing brick tiles he will find a market at living prices, besides he can drain his land with tiles made of such material as will last through time.

WORK FOR FEBRUARY.

February brings to the mind of every industrious farmer the importance of working energetically on a well ordered plan to secure a good crop. To do this it is necessary to

study your business and understand exactly at the end of each day what should be done next.

Do not over-tax yourself by planing too much to do, but take just enough to require a reasonable day's work to do well. This is the way to be up to time, and the only way we can conceive of any happiness in farming.

COMPOST.

You should lose no time with your carts, when the ground is dry enough to haul, in moving all the material you can to furnish food for the crop.

Haul the scrapings of the hill-sides, the ditch bank or vegetable mould of any description, at the rate of 500 bushels per acre, and mix with it fifty bushels of marl and twenty bushels of ashes and you will have a fine compost, or you may mix twenty bushels cotton seed and twenty bushels stable manure and have good compost, or you may put marl, ashes, cotton seed and stable manure in each pile which will make the compost better.

The way we build our compost heaps is as follows: We have piles for every acre or half acre, and level the dirt or muck about twelve inches deep, we then throw the marl, stable manure, or whatever we intend to put in it evenly all over it.

We then commence to shovel up in the centre, spading through to the bottom. When we throw our heaps up in February, we throw them up sharp at the top in order that they may not get too wet and be so heavy, besides it is injurious to it.

But when we throw them up late, we have them shoveled up flat or hollowing on top, in order that the water may enter and hasten that change which is necessary, in time. In the March number, we will give you our method in distributing this compost on the farm.

PLOW DEEP.

It is absolutely necessary to plow all your sub-soil clay land deep and in order to reap the full benefit of your compost and enhance the productiveness of the soil for this crop, it should be plowed up in time to freeze.

Do this and this summer, if there should be a drought, your crops will hold out much longer, as they will not burn so soon.

DITCHING.

This is a favorable month to ditch your hill-sides or to cut any lands that are underlaid with clay, as the clay is softer to cut through now than it will be later, and, if possible, every ditch upon the farm should be put in good repair.

With land well drained, plowed deep and composted, success in farming is easy, while on the contrary, if you use all the energy and planning of the best of farmers, you will never succeed.

This is the foundation to future success in farming, then let us adopt it at once, for in days past our chief stock in trade was the negro.

Then if we did not succeed in making a supply on the farm, we supplied our wants by this stock, but now our wants must be supplied from the soil.

MARL.

This is a good time to dig marl if you have not a supply, as it is never too late to dig and spread it over the soil, at the rate of two hundred and fifty bushels per acre, or put fifty per acre in compost.

IRISH POTATOES.

These should be planted this month, if you wish to have an early crop.—This profitable crop can be made on every farm in North Carolina, by the use of a liberal quantity of compost or barn yard manure. The more vegetable matter, such as leaves and straw the better.

Our experience is, that this crop is one of the most profitable crops we plant to the acre.

In the spring of 1865, we planted a lot of nearly five acres, where our hogs had been fattened and the result was a heavy crop, which to us was everything, as the Government had not left us a sufficiency of corn to feed our stock.

In June, of that year, we commenced boiling and feeding our hogs with them every day, with a small quantity of corn, and we were agreeably disappointed, for we never had such a healthy and thrifty set of hogs before.

We have followed this plan ever since, and have never had cholera or any other disease among our hogs, while before, we had various diseases. Therefore, we recommend boiled potatoes as a panacea to all the ills to which hogs are subject.

OATS.

Every cotton planter should plant a sufficiency of these to furnish his stock with an abundance of forage, and cease importing hay from the North.

Do not suppose that oats will injure your land, for it will produce a better cotton crop after oats than it will after corn. Prepare your land well, and if it be a clay soil, and too poor to produce a good crop, sow 200 lbs. of Peruvian guano, and you will have a firm crop. After the crop is taken off, a fine crop of weeds and grass will spring up.

Where the land is richest, sow the most seed. When you have finished sowing, let your land be as level as a yard. It will produce a better crop, besides it will be better to save than if bedded up for every eight or ten feet as is often the case.

STOCK

should be attended to as diligently this as any other month in the year; they should have comfortable quarters.

The droppings should be carefully collected, and carried to the compost heap in the farm and then mixed.

FUEL.

If you have not a sufficiency of wood for this year, now is the time to bring it up. It would be economy to get it from the land you intend to clear next. It facilitates the cook in giving you your meals, and the washwoman in giving you white and smooth ironed clothes, besides the comfort of having dry fuel that will make a quick fire in cold weather.

All who have been in the habit of hauling a load now and then as the emergency requires, adopt this plan and your days work will never be disjointed for this purpose.

CLEARING LAND.

This is the proper season to cut logs and burn them where you intend to clear, for you can save more ashes this month than you can in March, as the wind will be less likely to blow them away. We always burn all the brush and logs off, be-

fore we use a grubbing hoe, mattock or plow.

RAINY DAYS

you can oil and repair harness, and by having timber on hand, you can repair and make many farm implements, which is a great help in making the farm an easy success.

FENCES.

We see there has been a bill introduced in the Legislature, which leaves this important question of fence or no fence with the qualified voters in the townships.

With all due respect to the Legislature, we say they have acted most unwisely in allowing any to vote in the townships, except those who own the fence.

If the Legislature had taken the proper view of this subject, they would have fixed that qualification, which is necessary to make this law a success.

What will be the condition under this bill? It will be simply this. The townships where this law is most required is where the most of the land is cleared, and as a matter of course, there will be more voters, as there will necessarily be more laborers to cultivate this land.

There are but few good-intentional owners of land in every township where this law is most desired, that will not be willing to depart from this time-honored law, and there will be a few who, from prejudice, will go out and pander to the ignorance of those who do not feel interested one way or the other.

Think you, that the law under this bill will grant that justice to the interest of the farmers, when a few men in each township can have the power to defeat it by pandering to those who feel no particular interest, for the sake of having a few half-famished stock roaming about.

We do not want to be understood that the colored men would defeat this bill if left untrammeled, but we mean to say in every community there are a few white men, who, from some cause, [which we might mention] do not succeed and consequently they hate to see any other person prosper.

These characters would use just such devices as would carry the colored vote against the interest of townships. We call upon the Legislature to fix a qualification to vote, in order that this law may not prove inoperative by those who cannot, in any sense, be injured by its adoption, for it is very plain to our view that any law that promotes the interest of the land-holders, will in like proportion benefit the laborers on that land.

By doing away with the law of enclosure, you do away with that demon which has caused more bad feelings and law suits between neighbors than any other cause.

We gave our objections to that law in the August and September numbers of the FARMER, and the result was, some of our readers have not read the paper since, as they considered there should be no reconstruction of this law.

We are for the farmers interests, as whatever promotes his interest will promote every other.

As we have ever felt a deep interest in the welfare of young men, we hope they will not take it amiss when we say we are actuated by the

best of motives in giving these few hints.

Young man, never let any man hear you enquiring after capital to commence business, until you prove by merit of brains and muscles you deserve credit.

Go to some useful employment in the farm, machine shop, or at any honest occupation to which your mind may lead you, and there learn that all the capital in this land has been made by patient toil, perseverance and prudence.

Don't sit down or wander about any longer, waiting for something to turn up by which you are to obtain a fortune, but come to the farm, the field is sufficiently large for you; or go to some trade—there is a variety—accept one, and by giving diligent attention to it, capital will come to you.

Show to the world by precept and example, by integrity and promptness that you will do to credit and in a few years you will not have to seek capital, but capital will seek you.

Young man, you who have a small patrimony left from the wreck of war, let us say there never was a better day to accomplish a fortune than there is in Southern fields at present.

If you were reared in the lap of luxury, think not to live in the same style, but curtail your mode of living so as to have an income each year.—By so doing you can honestly return to the former luxurious mode of living in old age.

Leave off your wanderings in search of something by which you are to accomplish a fortune in a short time, and earnestly take up some honorable occupation, and thereby save thyself from the many vices of which idleness is the parent.

Come do as we have done, and better, for a number may accomplish more as they possess more brains and stronger muscles than we.

Therefore, at the risk of being styled egotists, we will give an outline of our transactions and thoughts when we first set out in life:

On the first day of January, 1846, nearly one quarter of a century ago, we commenced farming on a poor piece of land, with no help except hired laborers. The first and second years we rented this land; during the second our father purchased and gave it to us.

The first five years we did all the ditching and clearing we could, therefore we did not average $100 per annum net cash. The sixth we netted $800. The seventh, over $1,800.—After this, we had capital tendered us in abundance by those who would not have credited us before.

When the war commenced, we had out-stripped our every expectation, the door to wealth was opened, and it appeared that all that was required of us to do, was to pursue the same onward course.

But, alas! being as thousands of others, a devotee to the leader of the "Lost Cause," and having confidence in the ultimate success, as we honestly believed the cause just, that door to the fascinating chamber of wealth seemed effectually closed to us.

We went into a statement, debtor and creditor, and found that under the most favorable circumstances the account placed us in a worse condition than when we first commenced.

Our thoughts were many and are

easily understood by many Southern people.

Twenty years back, we were poor, but were young and had no family, but now we have passed the meridian of life and have a family to support. Our social and well regulated system of labor is destroyed and how can we succeed?

After surveying the circumstances as best we could, we determined to make one more effort, and to do this we had to revert back to first principles; to use perseverance and prudence, and in all our dealings, be strictly prompt and honest with all men.

We never expected to reach the door of wealth again, and to sit down and loose these virtues by idleness would be a loss of everything.

Young men, we are pleased to say, that while you have been in search of some shady place to live easy, or waiting for some friend to furnish capital, we have been at work in order to raise capital to prepare us a comfortable home.

Under the new order of things—thus far,—as under the old, we have succeeded much better than we expected.

To the wandering young men of the South, who have gone abroad, we say, "come home." We need you if you want to work, and if you don't want to work, stay where you are, for we have a thousand times too many idlers now.

Come, young men of all nations with these wanderers of Southern birth—there never was such an opportunity offered, and we earnestly hope there never will be an occasion again, when the services of educated and good men will be required to assist in rebuilding a country of lost fortunes.

Come, we have a soil and climate unsurpassed by any upon the globe; our fields are broad; our forests are abundant; cotton, sugar, tobacco and rice, the world cannot compete with, while all the cereals can be produced in an abundance.

If you wish to raise stock, there is no place where stock can be more profitably raised than in the range of mountains of the South.

If you wish to be a miner, then you can operate in mines of gold, silver, copper, &c., &c.

If you desire to become a manufacturer, we have as good water power as there is on the earth, and every other facility to make this a manufacturing country, except capital and energetic men.

If you wish to raise fruits or produce wine, then there is no better country than here to succeed. We invite all good citizens to come and engage with us, if they desire to become wealthy.

Do not believe that you will not be respected because you are from the North or foreign land, for we say a more generous and hospitable people never lived than our Southern people are.

But we say to all who come here to get office by pandering to the prejudice and ignorance of negroes, stay where you are, for these we have, are not only a plague to our social and political interest, but their course does and must prove a curse to our every industrial interest.

Do not say we transcend the duties

of an agricultural journalist, when the credit of the State is ruined, and poor men's homes are being, and must continue to be, sold for taxes imposed upon them by a set of profligates, who pay no taxes, and have no special interest in the welfare of the country, but seek self-aggrandizement at the expense of the laboring classes.

We say this in no political sense, but as a duty we owe that interest we represent. Therefore, we invite men of all nations, who desire the common good of a common country, as well as our rambling and despondent sons abroad and at home, to join us in the effort to make this the most prosperous and happy country in the world.

In order to do this we must bring perseverence, truth and justice face to face with idleness, which is the hand-maid to vice and ignorance.

Therefore, we say come with the virtues of "greatness, dignity, fortitude, integrity, benevolence, goodness and severity of soul," and help to reconstruct the eden of earth that it may be the paradise of men while they live.

A GOOD CROP.

We are informed by Dr. Baker, that upon his and Judge Howard's farm, known as the Bell farm, they made a bale of cotton to the acre, and a sufficiency of corn to run the farm this year.

They planted 135 acres and worked sixteen hands. [Our readers will bear in mind that in our report of the crop prospect last September, we requested that all who might desire to see the effect of marl composted, this was the farm where they could see for themselves.]

Upon this farm, there was no pork raised; here is an error, for this is one which has fine facilities for raising, not only hogs, but cattle, and they might also, with little expense, raise all their mules, with much less cost than to buy them.

STILL BETTER.

Mr. Jessie C. Little, a neighbor of ours, made eleven bales of cotton and ninety barrels of corn, and double as much pork as was consumed in producing and housing this crop.

The money paid out for hired labor was $115, all told. He had an old man over 80 years old and a woman, from planting time until his cotton was chopped to a stand, which was all the extra laborers he had in making this crop, the remainder was in housing.

This was done upon a farm which is not considered more than an average one in the township, by a man who followed the flag of the "Lost Cause" to the end. What a noble example he has set for the young men of our country.

STATE GEOLOGIST.

This distinguished gentleman, Professor Kerr, visited our domicile on old Christmas day, and we regret very much our absence, as we would have taken him with pleasure over our farm to our marl deposits, or to any special point he might have desired in Edgecombe.

Professor, in behalf of the people of Edgecombe and adjoining counties, we invite you to come and visit our farms, and make at least one

speech in each county on agricultural reconstruction.

Come, our farmers will generously receive and willingly hear you.—Send your appointments ahead, in order that none may be disappointed in not hearing you.

EDGECOMBE COUNTY, N. C., TYAN, Coco SWAMP, Jan. 20, 1870.

Editors Reconstructed Farmer: Being a reader of your paper from its commencement, and desirous that it continue to live and be a periodical both interesting and instructive to the farmers of the county and State, I have concluded I would in my way, talk to the farmers a little about red clover, or in other words, I would give them my opinion, based upon experience, of its value as an improver of their lands, and as a forage plant.

I view it as the most valuable grass for both purposes that has ever come under my observation; and I feel certain that no farmer, whose land is adapted to it, or has prepared his land to grow it, and then grows it a few years, will never be without his clover lots, and I am sure his horses, milch cows, lambs and pigs would never consent for him to abandon its use.

There are a few other farmers in this county that can bear testimony with me as to its great value, to-wit: William S. Battle, Col. William H. Knight and some others, but more especially Mr. Battle, and I hope he will give the farmers his large experience in its cultivation and use; more especially his views of it as hay, and how to manage it to make good hay.

I have cut and made hay out of but little that I have grown, having graised my lots almost exclusively.

I find that all stock are fond of it, and grow and fatten on it. I feel perfectly satisfied from my experience that we can grow no plant or grass that I am acquainted with that will compare with it as a forage plant. In fact, I think one acre in red clover, is worth to a farmer more than two in corn or oats.

Now, my brother farmers, if I have said enough about red clover—and I have not said a word but what I know from actual experience—to get you willing to appropriate a few acres of your good cotton or wheat land to a clover lot, I will, in a few words, tell you how to have one that will make you feel proud and rejoice that you made two blades of grass grow where but one grew before; provided you can rejoice in anything except the almighty cotton plant.

First, as to soil, it must not be too soft or sandy, but is commonly called among farmers in this county, stiff or tenacious land, having, as a general thing, a red or clay sub-soil. Well, says the farmer, I have no such land on my farm, but I know better, there is hardly a farm in this county of any size but has such a soil.

Secondly, you must make it good by deep plowing and manuring.

Thirdly, you must lime or marl it well, because the clover plant will not grow on land that has not got a considerable per cent. of lime in it, naturally, or put there by the farmer, and it must be thoroughly mixed with the soil for the depth of from four to six inches, by repeated plowing and harrowing.

Fourthly, you must prepare your land well—plow and harrow until you get the land in a fine tilth; in other words, put it in as good condition as you would if you wanted to make a large crop of cotton or wheat on it.

Fifthly, having thus got the land ready, and provided yourself with from twelve to fifteen pounds of good seed to sow to each acre you intend sowing, sow them on a freshly plowed surface the last week in February or the first in March, and lightly harrow or brush them in, and then keep all stock off for the first year, and if you fail to have a clover lot that don't make you glad, and the pigs curl their tails, and the poor over-worked mules rejoice when Sunday comes, then I will say I have misled you, or you don't love the useful and beautiful.

Reader, you will see here that I recommend sowing the clover seed by themselves, without sowing any other grain with them, because I believe it is best, judging from last year's experience. Last year was the most trying time on clover I have ever seen since I have been raising it, owing to the severe drought; but that sown by itself died less than that sowed among wheat or oats.

If, Messrs. Editors, I have not made myself sufficiently undersood, I am ready at any time to give my brother farmers my experience of fifteen years with red clover.

C. B. K.

Editors Reconstructed Farmer :

Gents : How many acres can one mule cultivate in cotton and corn in a light sandy soil, using sweeps, except the first time, when it is "barred off" with a one-horse plow, and the dirt thrown back with the same plow; only corn enough to be made for the support of the mule and plowman the next year, the land to make about five barrels of corn to the acre ?

The practice here is to "bar off" as soon as the cotton is well up, and throw the dirt back as soon as it can be done, the advantage claimed is that the cotton can be chopped out better as it is left in a narrow streak by the "barring off." Now, this practice was correct before the days of planters, but as the cotton now comes up in a narrow streak not an inch wide, when the Dow Sower or Johnson planter is used. What is the advantage of "barring off" and have your cotton falling down if it rains, before you can throw the dirt back to it? Why not use the sweep the first time, or better still, a cultivator opened wide enough to fill up a row, so as to run only once in a row; this neither throws dirt to or takes it away from the plant. This mode of cultivating, supposing the land to have been broken up well with two horse plows, Watt's or Brinly's, and the soil to be light and roudy. On badly prepared or heavy clay soils, I admit it would not do. Now how much can a mule cultivate in this way.

Wake county, N. C. F.

In response to the first enquiry of our correspondent, we must confess we do not know how many acres could be cultivated by one mule under such circumstances, as we are of the few farmers that never did plant as much per mule as our neighbors.

For instance, we have for every three plows four mules, which we think is economy, as we can at all times, under the most unfavorable seasons, catch up when behind.

One good plowman with a good mule might plow successfully forty

acres with ordinary seasons, while under good seasons, he might plow more. Four acres producing five barrels per acre, would be an ample sufficiency to feed plowman and mule.

He desires to know what advantage can be derived from "baring off," as the cotton planters sow it in a narrow streak. There is none, and never was any advantage to be gained when the seed was sowed by hand, unless the cotton was neglected so long as to get so grassy that it became necessary to put the bar of a turn plow to it to cover it up on the middle.

In 1857 and '58 we used the cultivator with good success on our cotton farm. We plowed up and down in each row, which flushed the ground all over, furnishing a sufficiency of dirt for the young plant. After the plant gets up about knee high, we put what is called the fluke, with narrow mould boards, in order to place more dirt to the cotton.

We thought of widening our cultivators out, so as to plow the whole row at a time but found we could not succeed since our rows were not regular in width.

Therefore, we do not think with our careless laborers, we can have our rows run and seeds sowed with that precision to plow a whole row at a time without plowing up cotton in one place and running too far from it in another.

To the last question, we say that if you can have your rows run regular upon such land as described, that you might, after it is planted, cultivate more than double in the usual way, by plowing out a row at one time.

On the 20th page of the Reconstructed Farmer, you will see our views on the cultivation of cotton.—We wish it understood that the proper way to cultivate a crop of cotton easily, is to plow to keep the grass from coming, and not allow it to come, and then destroy it.

As well as we recollect in 1859, we had a long spell of rainy weather in May, and as we had a good supply of mules, we held off as usual for the land to get in good order, and the result was we had a full crop of young grass.

That year, cultivators taught us they would not do to kill grass.

FARMER'S FRIEND.

The seed sower for cotton, invented by Messrs. Thorn, which may be found in the advertising columns of the Farmer, will prove of interest to the farmer. We know these gentlemen to be reliable, and what they say may be relied upon.

They say they are willing for planters to give them a fair trial, and if they do not perform the sowing satisfactorily, they will take them back free of charge. If this is not recommendation for them, we do not know what can be. Read their advertisement.

To Prevent Wounds from Mortifying.—Sprinkle sugar on them.—The Turks wash fresh wounds with wine and sprinkle sugar on them.—Obstinate ulcers may be cured with sugar dissolved in a strong decoction of walnut leaves.—*Am. Stock Journal.*

HORTICULTURAL DEPARTMENT.

Rev. J. B. CHESHIRE, D. D., - - Editor.

SOME DIRECTIONS FOR BEGINNERS IN VEGETABLE GARDENING.

IRISH POTATOES.

Any open weather in this month is a good time for planting this valuable root, for an early crop. For a late crop, they may be planted in the last of June.

Plant in rows from two feet to thirty inches apart, in rich warm soil, and cover three or four inches deep. Lay the manure thickly in the bottom of the furrow and plant the potato sets immediately upon it, and cover with earth. Let the sets be from nine to twelve inches apart.—The best sets are whole potatoes about the size of an egg. If larger than this, cut them in pieces, containing two or three eyes. Hoe them well as soon as they appear above the ground and hill them up gradually. Nipping off the blossoms before they open will increase the yield.

GARDEN PEAS.

Sow in drills five feet apart, thus having room for salad between the rows, and two inches deep. When well up, hoe and draw the earth to them lightly, and stick them with brush. They are sometimes sown in January, but they are not produced much earlier than when planted in this month.

The ground for early peas should be rich and dry, but not freshly manured, as they make an overgrowth of vine.

For late peas, the ground should be rich and strong, enrich with well-rotted manure; but never with fresh, as this will fire the plants. Peas may be sown at intervals of one or two weeks, from the first opening of spring until after corn planting time, to have a succession of crops. Single rows yield as much or more than double rows.

ONIONS

may be planted in the fall, but they are better planted at this season.—Plant the sets in rich light soil, in drills twelve inches apart, the plants from three to four inches in the drills. The scrapings of the fowl house is the very best manure for this plant.

EARLY CABBAGE.

Sow now, and as soon as the plants are large enough, set them at eighteen inches apart, in rows three feet wide, in rich soil, and work them often and deeply, with a pronged spade, if you have one, and if you have not, you ought to get one as soon as possible, for it is the very best of garden implements.

LATE CABBAGE.

Sow in May, in strong, deep soil and work among them with the hoe and pronged spade until the leaves touch.

BEETS.

Sow in deep rich soil, in drills twelve or fifteen inches apart, and about an inch deep. Thin the plants from eight to twelve inches apart, and hoe and spade them often till the tops cover the ground.

RADISHES.

Sow thinly in drills, in a light rich soil. When they are well up give them, occasionally, a liberal sprinkling of ashes and it will improve the growth greatly.

LETTUCE.

Sow thinly in very shallow drills, a foot apart, in rich soil. Cover very lightly, and if dry, water the plants.

To make them head well, thin them out to nine or twelve inches apart, and hoe them often, keeping the ground clear and loose.

PRACTICAL HINTS FOR THE GARDEN AND GROUNDS FOR FEBRUARY.

THE GARDEN.

The cold beds, containing plants wintered over for early spring culture, will now need more care, in giving plenty of air and exposure, by removing the sashes, whenever the weather will admit. Light and abundance of air are now very essential, as well as good protection by covering cold nights, to prevent too great radiation.

A garden with a southern exposure, declining to the south, can be protected by a close wall or fence, run across its northern side, so that early or late crops can be much more successfully grown than in any other exposure. Such a fence or wall not only protects against high, cold northerly winds, but it also protects against frost, as it acts similar to a dam across a stream of water, holding back the cold air to its height when it pours over, not striking the ground till it reaches some distance from the fence, while the air under and back of this volume to the fence is warmer. To obtain the earliest and best results, then, from a garden, it should have protection of some kind, to break off prevailing cold winds; such protection, by keeping back cold air, radiates or reflects the heat, thus increasing the earliness and value of your garden.

In all garden operations, manure is the key to success, and its accumulation is always in order; now is the time to bring it into proper shape for use in the garden and grounds. A suitable supply will be needed, the latter part of this month or during the next, for the hot-bed; coarse horse stable manure should be accumulating and be turned over to encourage heating. If it is getting dry, water it with water drained from the manure heap, if to be had, or with pure water. A supply of leaves should be in readiness to add to the manure to prolong its heating quality.

Where early forcing is desired, hot-beds may be made during the month. Various ways of making them are practiced by different gardeners; but as good a way as any we have found to be, to make an excavation twelve to sixteen inches deep, and a foot larger on each side than the frame to be used; fill the excavation with your manure, mixing in considerable quantities of leaves; lay the manure, etc., in evenly and close, so that when it heats and settles it will settle even, leaving no hollows or hummocks; fill it and raise till you get a bed of manure two and a half to three feet thick, build up the outer edges square; place your frame centrally on the bed, and bank the manure and frame with ten to twelve inches of earth, cover the bed with about six inches of fine rich loam soil, and rake it smooth and even; now put on your glass sash and let the heat rise; cover it nights with mats or shutters; the heat will rise to

100 degrees or more; after it begins to subside, say fall to about 80 degrees, sow your seed. If sowed earlier or at first, the heat is apt to destroy the vitality of the seed, although some varieties will endure a greater degree of heat than others.

Preparation for open air culture should be in order at all times, when the soil is bound in frost, and to this end bean-poles and pea-brush should now be prepared in readiness for spring use; cut your bean-poles to an even length of eight feet, trim, sharpen, and pack away convenient of access when wanted. White birches make the best pea-brush, and should be cut to a length, sharpened, and piled in an even pile, with a weight on to press them in good shape for setting in the rows.

A thaw will give opportunity to dig such root crops, etc., as are left or buried in the ground over winter—parsnips, salsify, etc. Horse-radish can now be dug for family use, be grated, bottled, and a little water added; it then makes an excellent sauce with boiled victuals, etc.

If you are fond of rhubarb pies, you can force one or two plants, and get a supply, by setting the roots in boxes in the green-house; or, you can put a headless barrel over the plant, out doors, and pack around it fermenting manure two or three feet thick, covering with several inches of soil and over the barrel place a glazed sash, which will soon start the plant and give a supply; such plants will, however, do but little, after thus forcing, till recovered the next season.

Success in gardening depends upon a supply of good seeds; for, however well other requisites may be provided and complied with, *good seeds* will only grow *good* vegetables and plants.—Provide *now*, if not already supplied, a supply of good fresh seeds, true to name, and of the best quality. Test all seeds by sprouting in damp moss or soil, kept warm, or in a mild atmosphere.

FRUIT GARDEN.

The success in raising fruit depends upon *care*, as well as other circumstances and essentials; without care, fine fruit cannot be expected.—Insect and other enemies are to be looked after and destroyed; pruning and other culture are to be given.

All neglected currents, gooseberries, and grape-vines, and dwarf fruit-trees, may be pruned during a mild spell before the sap has begun to flow or start.

Strawberry beds, grape-vines, and other small fruits, not covered before, may yet have a covering of evergreen boughs given, and avoid the damage that would result from changes of temperature, freezing and thawing.

Prepare posts and other material for trellises that may be needed for grape-vines, etc., the coming spring.

Spread manure around the trees, current and other bushes, and plants, in the fruit garden, that were neglected in the fall.

ORCHARD AND NURSERY.

Trees injured by ice or snow should be looked after often, and broken limbs removed, and as soon as the frost is out of the wood pare the wound smooth and clean with a sharp knife, and if a large one, cover it with grafting-wax, shellac varnish,

or clay and cow manure mixed, and bound on with a cloth, etc.

Go over the orchard and nursery frequently, to see that trees are not girdled or barked by mice or rabbits. If any are found thus injured, attend to them at once, if to do nothing more than pile snow and tread it solid over the wound. If attended to while the wounds are fresh, little fear need be entertained that the trees cannot be saved by some of the various ways of treatment to be resorted to in such cases, such as bridging the wound with scions set in the bark —one end being inserted below and the other above the wound; covering the wound with a thick varnish of shellac dissolved in alcohol; covering with the clay and cow manure mixture bound on; or even banking it over with soil well trod down, etc., all of which ways have proved successful when thoroughly performed and attended to in season.

All trees having loose outer bark, moss, etc, on their trunks and branches, would be benefited by scraping, and washing with a strong solution of soap and water, thus destroying insects and their hiding-places.

The eggs of the caterpillar will show, encircling small twigs, the varnish which covers them glistening, and showing quite plainly on a pleasant day; they should be removed and burned, thus saving the injury they would do if left to hatch.

The canker-worm moths will begin to come out as soon as the ground thaws, and seek to ascend the trees to deposit their eggs. The means of protection is "eternal vigilance."—Many inventions and protectors are recommended, but none are entirely effectual. About as good as any is, to wind around the body several turns of straw rope, and place old rags or like in the crotches, and examine these frequently, seeking the moths and destroying them as discovered.

LAWN AND FLOWER GARDEN.

Trees in the lawn and pleasure-grounds should have care, to see that snow and ice do no injury, or mice bark them; and if so, be attended to at once, the same as recommended under "Orchard and Nursery."

Pruning and manuring may be done wherever needful, and there are but few trees but what will be benefited by manuring. Remove all injured or dead branches, and those which disfigure the shape.

Flowering and ornamental shrubs may be pruned and thinned, or cut back, as necessary. Some which blossom on new wood are best cut back, others pruned and thinned to a tasty shape.

Dahlias and other tuberous roots stored in the cellar should be looked to, to see that they are not too damp or commencing to mould; if either, they had better be removed to a more secure place free from either objection.

Stakes, trellises, and other woodwork which go out doors, are improved by having a coat of paint.—Rustic work, to be made enduring, should have a good coating of oil given.

To work the garden and grounds, suitable tools are needed, which should be kept in good repair.—Cheap ones are the dearest in the end. If new ones are to be purchased,

do it now, and get good steel light ones made for service; a few cents difference in cost is more than made up in ease in their use and extra durability. Paint and repair old ones, and withal have a tool-room, and see that every tool has a place, and, when not in use, in its place.—Time, trouble, and vexation enough will be saved, in one or two seasons, to pay the expense of a cheap tool-house.

SELECT FLOWER-SEEDS AND FLOWERING-PLANTS.

The following species of annuals, with their varieties, if well cultivated in good soil, cannot fail to make the garden gay from July to November. For the early spring and June flowers, dependence must be placed upon perennial herbaceous plants, including spring-flowering bulbs. The aster, now called *Callistephus sinensis*, in all its splendid improved varieties, may be considered one of the most important flowers for August and September. Snapdragon—*Antirrhinum majus* and *nanum*,—of many colors, although a biennial in dry soil, flowers the first year from seed, from July to hard frost; sweet alyssum—*Alyssum maritimum*,—always in bloom; double camellia and rose improved balsams—*Impatiens balsamina*,—not good for bouquets, but, when in spikes, fine for dishes and vases; Calliopsis, formerly Coreopsis, *Calliopsis Drummondi*, and some of the new dwarf var.; cockscomb—*Celosia cristata*;—candytuft—*Iberis*,—in various colors; larkspur, double var.; *Delphinium consolida* and *Ajacis*; pinks, flowering from seed the first year, or biennials; Dianthus, *Heddewigi, imperialis, chinensis*, in splendid varieties; everlasting flowers—*Helichrysums*,—in variety; sweet peas—*Lathyrus odoratus*;—petunia, hybrid varieties; Drummond phlox, brilliant colors from pure white to scarlet and dark crimson; portulaca, all colors, fine for masses; mignonette—*Reseda odorata*;—mourning bride—*Scabiosa atropurpurea*,—sporting into many colors and shades from pure white to almost black, in bloom from July to November; ten weeks stock—*Mathiola annua*,—numerous varieties and colors, in bloom to November; marigold, the old-fashioned flower, and the new dwarf *Tagetes signata pumila*; pansy—*Viola tricolor grandiflora*,—a great favorite with all; double zinnia—*Zinnia elegans fl. plena*,—one of the modern and most beautiful novelties; Tom Thum nasturtium—*Tropæolum nanum*,—choice bedding plants of various colors; four-o'clock—*Mirabalis Talapa*, a great favorite with some, but cannot be used for bouquets, or any other way for table ornament.

CLIMBING PLANTS.

Maurandia Barclayana in various colors; cypress-vine, red and white—*Ipomea quamoclit*—var.: *Thunbergia alata* in variety; *Lothospermum scandens; Cobœa scandens; Calempelis scaber; Loasa aurantica;* canary-bird flower—*Tropæolum canariense* or *aduncum*. None of these will succeed well unless started in the greenhouse or hot-bed. The varieties of the morning-glory, scarlet bean, and hyacinth-bean, are well known as suitable for covering screens, walls, &c. Tall nasturtiums are very showy climbers, and may be used for the same purpose.

TRAILING OR PROSTRATE PLANTS.

All the nemophias, dwarf convolvulus, *Abronia umbellata*; eschscholtzia,

Sanvitalia procumbens ; Lobelia gracilis, with its improved varieties ; *Nolana atriplicifolia*, with alyssum and portulaca already named.

EVERLASTING FLOWERS.

In addition to the helichrysums, there are *Ammobium alatum, Acrolineum rosenm, Rodanthe Manglesii* in variety, globe amaranthus—*Gomphrena globosa* —in variety, *Xeranthemum annuum* in variety.

TALL-GROWING PLANTS.

Cannas, double sunflowers, *Ricinus sanguineus*. The following annuals may be added to this list if more are wanted : viz., *Chrysanthemum, carinatum* and *coronaria* in variety ; *Ageratum Mexicanum* ; *Branchycome iberidifolia* ; *Cacalia coccinnea* and *aurea* ; *Centaurea*, various sorts ; *Godetias* ; *Seneco elegans fl. plena* in variety ; and varieties of the *Silene*. Most of these last named are very pretty, and useful for bouquets. *Amarantus tricolor* and *melancholicus ruber* and *Perilla nankinenses* are cultivated for the beauty or novelty of the color of their leaves.—*Tilion's Journal of Oorticulture.*

FLORICULTURE.

With no slackened zeal, should the florist rest supinely waiting for the warm days of spring to rouse him from his lethargy—he or she should be up and doing, in devising improvements to be commenced so soon as the frosts are out of the ground, as well as such designs as may project into the summer ; also obtaining from the seedsman, or procure from some good friend, seeds of such new or favorite flowers as may have attracted attention the by-gone summer ; for a true lover of flora, longs to possess, at any cost, a portion of all those gems by which his taste in that way may have become captivated ; and when such people ask for a cutting, or slips of some of your favorites they are often ready to add, as did the Irishman to a certain gardener, "Oh sur, if you'r about to give me the cutting, plase let there be a root at it." No one, surely, can well find fault with the round about way such individuals take to have their tastes gratified ; and although it is deemed fashionable at the present day for persons to say that they love flowers, yet the class we have now in our eye, love them for the flowers themselves, and the gratification derived, delighting to cultivate and discant on the fair offspring of God's creation, and are found to be ready made friends of all such, who, like themselves have espoused flora's cause ; in truth, we have always found that the friendship of the one who so loves is worth the cultivating, being genuine and refined ; therefore we say, cultivate a taste for flowers, as the occupation of any leisure moment in this way is the bane of gossip, and the promoter of health and happiness.

Towards the end of the month, make a light hot bed in some sheltered spot, with leaves and stable manure, cover the surface six to eight inches thick with light earth, on this sow Zinnias, Hollyhocks, Everlastings, Phlox Drummondii, Ten Week Stocks, &c., covering the glass at night with mats, and so soon as the plants make their appearance, let them have all the light possible, giving air in mild weather.

In the Greenhouse, observe the instructions, given last month with regard to air and giving of water and

should the Green fly make its appearance then fumigate with tobacco; to kill Red spider, pure water mixed with a little sulphur, well applied with the syringe, will soon subdue them.

Plant in single pots such seedings and cuttings as are well rooted and fit to handle, and shift into larger ones such plants as have become pot-bound, or of which you wish to make large specimens. A few Gladiolus roots may now be potted, these look well when in bloom mingled with shruby plants, and do not take up much space.

So soon as Camellias have done blooming, they may be shifted into larger pots, and the temperature should be raised so as to range between 60 and 70 degrees, giving a partial shade, and keeping the atmosphere humid.

Re-pot Gloxinias and Achimenes, observing to drain the pots well, set them in a warm part of the house, and give but little water till such time as they begin to grow. Amaryllis bulbs should now be started into growth by giving them more heat and water.—*W. D. Brackenridge, Nurseryman, Govanstown, Md., in Maryland Farmer.*

SUNFLOWERS AS DISINFECTANTS.

Experiments in France and Holland have shown that sunflowers, when planted on an extensive scale, will neutralize the pernicious effects of exhalations from marshes. This plan has been tried with great success in the ferny districts near Rochefort, France; and the authorities of Holland assert that intermittent fever has wholly diappeared from districts where the sunflowers have been planted. It is not yet determined what effect the flower produces on the atmosphere; whether it generates oxygen, like other plants of rapid growth, or whether, like the *coniferæ*, it emits ozone, and thus destroys the organic germ of miasms that produce fever.—*Journal of Chemistry.*

SUGGESTIONS IN BUILDING DWELLING HOUSES.

In planning a dwelling for family occupancy, three prominent characteristics are to be kept in view:

1st. The size and arrangement of the house must be adapted to the comfort, and to the means of the family.

2d. The climate is to be considered.

3d. In connection with climate, the material to be used in the construction.

Keeping these in view, I shall make a few suggestions for the consideration of families of moderate fortunes, who may be planning country residences.

1st. That but two apartments besides the hall, the kitchen and the offices, are required.

These two, a dining room and a parlor should be large and adjoining, so as to communicate. This for convenience and economy of fuel in winter.

Having determined on the size and proportions of these rooms, and the chambers over them, the next consideration will be the kitchen and domestic offices.

These should each be planned separately, and then placed together in such contiguity as will est adapt

them to the family requirements.—The error mostly committed by those planning dwellings of moderate size is in first laying down the outline or outside of the house, and afterwards dividing it into apartments; the consequence of which is, that the rooms are likely to be reduced in size to make place for the pantries, closets and other offices.

An ingenious architect will, after having determined on the number, size and proportion of the apartments, arrange them with proper regard, both to the convenience and architectural beauty of the house. Domestic comfort should not be sacrificed for outside show.

We have here in this country to encounter a climate which differs from that of most other countries. The thermometer ranges over more than 150 degrees Fahrenheit, from summer to winter. That is, we have in winter to contend against a temperature of more than 10 degrees below zero, and in summer of 140 degrees F., in the sun.

The architect has to protect the occupants of his dwellings against the dangers and discomforts arising from these extremes; to exclude heat in summer and cold in winter. Whilst his walls, and doors, and windows must exclude the rigors of an almost Arctic winter, they must equally provide against the pernicious dampness of our spring weather, and the sultriness of our summers.

Double windows and double doors —with every conceivable pattern of weather strip—are used to close out the penetrating blasts of winter, then to be removed on the return of summer to admit the breeze. The double windows and double doors generally used are unsightly and inconvenient. In place of them I would suggest oriel and bay windows. These, when properly constructed, so as to present three open sides, each provided with sash and shutters, which may be opened and closed at will, afford protection from the summer sun, and, when opened, entrance to the breeze in our sultry season; in the winter time, when provided with shutters and glass, so arranged as to shut them off from the apartments, they are a much more effectual protection against the entrance of cold than any other window.

Casement sash, when they can be used, and when properly constructed, are the cheapest and the most conducive to comfort of all others. At the same time, while admitting free ventilation in summer, they exclude wind, rain and snow in winter.

Lastly: As regards the material to be used in the construction of the building, I recommend a wall of common cheap brick, to be prepared for weather boards—not frame,—with which the building is to be encased.

A house thus built, the weather boards being nailed on *horizontally*, will be found to be the cheapest, the most comfortable and the most enduring of all others in this climate.—Let any one observe a house built of brick or stone, either painted or plastered, and it will be seen that after a drifting rain the walls become saturated with moisture. And should the winter immediately succeed, this moisture will freeze into ice; and the residents are, for the season, encased in ice and dampness.

Lathing a house on the inside will certainly exclude some of this moisture, but nothing except weather boarding will protect the walls from the ruinous effects of moisture and ice. By weather boarding a brick or stone house, we effectually exclude cold and heat, and wind and moisture.

As to the durability of wood there can be no question when it is painted, and when the boards are placed horizontally and well lapped.

In New England, New York and the Southern States, wooden houses may be seen still in good repair which are more than a century old.

Every architect has seen the studding and joists and jamb-casing on the eastern sides of stone houses greatly decayed, but after a few years of occupancy, the result due to the dampness of the stone.

A brick house weather boarded will not require lathing on the inside of the walls. I have seen the ceiling of a room reeking with moisture in damp weather, whilst the walls, which were plastered on brick, were dry.

Before closing, I will draw attention to a frequent cause of dampness or sweating walls, namely, that sand is in some instances used in the last coat of plaster, which has been procured from the salt water beaches of the lower Delaware. Sand from thence contains salt, which, in dry weather, may be dry, but in damp, sweaty weather, the salt deliquescing, will forever cause damp ceilings. After a time, not only will the plaster so composed become rotten, but also whatever wood work is in contact with it. Hence, care should be taken to procure the sand from the upper Delaware.

In a house of moderate size the ceilings should not be higher than ten feet.

High ceilings in winter are not easily warmed; and, besides this objection, high ceilings entail difficult stairs. Where the ceilings are to be ornamented, every foot above ten feet in height will require a very large addition to the length of the room. For example, take into consideration a room, the ceiling of which is to be adorned with paintings, would it not be absurd to have those ceilings of so great a height, in proportion to the length of the room, that the ornaments of the ceiling could only be seen by a painful elevation of the head? Just taste requires that the fresco or ornamental painting on a ceiling may be seen without an effort; and this can only be done when on high ceilings, in very large rooms. In walking through a suite of rooms of pleasing proportions, the paintings on the ceilings as on the walls are enjoyed if viewed without fatigue.—*E. C. E., in Builder's Journal.*

Keeping Bouquets Fresh.—If our lady readers wish to keep a bouquet fresh, let them drop a tablespoonful of powdered charcoal into the water intended for the flower stalks, and they will keep their freshness and perfume for several days, and look and smell the same as those just gathered. The charcoal settles to the bottom of the vase, the water remaining clear.

Honey Vinegar.—One pint of strained honey and two gallons of soft water. Let it stand in a moderately warm place. In three weeks it will be excellent vinegar.

THE POULTRY HOUSE.

CURE FOR ROUP.

One of the most troublesome diseases in the poultry yard is roup, which, in its general characteristics, is in some respects similar to catarrh. There is discharge from the nostrils, the lids of the eyes become swollen, followed by swelling of the face, and the bird finally dies from being unable to take food or from suffocation. Many consider the roup contagious, and it is not unlikely that such is the case. Fowls drinking from the same vessels will take it.

Mr. Alonzo Snider, of this city, one of our best Western poulterers, kindly furnishes the *Prarie Farmer* readers with a cure for this disease which he gives and vouches for, as follows:

"When the fowl is first taken with roup, no matter how badly the head is swollen, remove it to a dry room in the barn, and give a dessert spoonful of alum water twice a day, as strong as it will dissolve; also wash the subject's head in it. If the fowls rattle badly in the throat, make a swab by tying a little tow on a small stick, and swab the throat out with the same mixture. In this way I have cured fowls in two days, that were nearly blind with swelled heads, and I have never known it to fail in a single instance, if taken in season."

ANOTHER CURE.

A Richmond correspondent communicates the following cure which he says is infallible: Take of sulpher and castile soap equal quantities, and make into pills the size of garden peas; give one a day until the disease is cured.—*Maryland Farmer.*

USEFUL RECEIPTS.

Remedy for Red Water in Cattle.—A correspodent in the *Maine Farmer* gives the following cure for red water, or a discharge of bloody water in cows and oxen: For a cow, I take two ounces of nitric acid and divide it into three equal parts, and give one part in half a pint of water every other day, till I give the whole. This is a sure remedy, that never fails unless the animal is past cure. For oxen I give one ounce for a dose.

Inflamed Bowels in Cows.—If a cow fails to eat her after-birth, does any injury result therefrom? and if so, is there any remedy. What is the character of the injury.

What remedy would you advise for inflamed bowels of a cow that has very recently given birth to a calf. She was driven about forty miles and give delivery in about half an hour after her arrival. R. V. M.

[We are of the opinion that a cow should be allowed to eat the afterbirth, as we act contrary to nature to prevent it. Herbiverous animals would not have this propensity to eat the placenta, was there not some useful purpose to be effected by it. It is either designed by nature to support the strength of the animal, or to have some aperient or salutary effect on her; cows that do not eat it often become feverish, and the bowels and udder inflamed, when inflammation of the bowels ensues the cow should be bled and physiced, kept moderately warm, and have warm water with bran mashes, half-pound. Epsom or Glauber's Salts make a good physic. Oil cake meal is very healing to the bowels if fed as a warm mash.]—*Am. Stock Journal.*

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Will soon be on exhibition at Wilson, Rocky Mount, Greenville, Battleboro, Enfield and other places. A sample is now on exhibition at the store of Messrs. PENDER & JENKINS, Tarboro, who will take pleasure in showing the machine, and explaining its operations.

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L. 1. No. 11. March, 1870.

THE RECONSTRUCTED FARMER

A

Monthly Magazine,

DEVOTED TO

THE FARM, THE GARDEN,

AND

THE HOUSEHOLD.

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN, }
JOHN S. DANCY, } - - - - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment" Agricultural Amendment.
For the Sword and Bayonet, the Plow Share and Mattock.

VOL. 1.] TARBORO, N. C., MARCH, 1870. [No. 11.

FACTS AND FIGURES FOR FARMERS.

This article, like a dictionary, may prove rather dull reading, but, like the dictionary, again, it will prove very useful for reference, and we doubt whether any other paper in this number possesses greater value. The tables are compiled from the best authorities, but they may not be entirely free from error. If any one should discover errors we shall be pleased to have them pointed out.

DATA IN MECHANICS AND RURAL ECONOMY.

In plane earth excavations, one man ought to execute each day, ten cubic yards, with spade and wheelbarrow, depositing the dirt at any distance within 120 feet.

One man can cut two cords of pine wood per day; from one cord to one cord and a half, according to the character of the growth, is a good task.

A mason can lay 1,000 bricks per day; one hand attends two.

A pair of sawyers ought to cut 900 superficial feet per week, of pine timber, when the hewing has been previously done, or 600 feet with the hewing.

A man or boy with a good horse and plow, ought to plow about 1⅛ acre per day, flush, for if he work ten hours, and cut and turn a furrow nine inches wide, he will be required to walk at the rate of three miles per hour to accomplish his task.

Having given the width of furrow slice cut by any plow, the number of hours at work, and the rate at which the team travels per hour, the surface that such plow and team can plow per day, may be calculated after the manner of the above example.

N. B.—In the above example, the acre is assumed to be seventy yards square. An ox team will travel twenty miles a day, and hence may be calculated the the quantity of hauling which ought to be done at any given distance, making the proper allowance for the time necessary to load.

A horse team will travel twenty-five miles a day.

A good 4-horse team, on a common road, will haul two cubic yards of stone at three loads.

One gallon, or even 1-10 of a bushel of clover seed to the acre, is a sufficient seeding.

One bushel of ground plaster or gypsum per acre, a sufficient application on clover or other grasses.

MEASURING LAND.

Almost every farmer has some way of measuring land, and the most common is to step off five paces for a rod, and call sixty by sixty-five paces an acre. For common purposes this mode will answer very well, but when the exact measurement of a piece of land is desired, it cannot be depended upon as being at all accurate.

When a field has once been measured correctly a man knows exactly how much seed will be required to put it to grain, and also the exact yield per acre of any crop he may see fit to put upon it.

A light pole just sixteen feet long, is a cheap and convenient measure, but a four-rod tape line is much better.

An exact acre can be found by the following table of distances :

A plot of ground 5 yards wide by 968 yards long, contains 1 acre.

A plot of ground 10 yards wide by 484 yards long, contains 1 acre.

A plot of ground 20 yards wide by 242 yards long, contains 1 acre.

A plot of ground 40 yards wide by 121 yards long, contains 1 acre.

A plot of ground 80 yards wide by 60½ yards long, contains 1 acre.

A plot of ground 70 yards wide by 68 1 7 yards long, contains 1 acre.

A plot of ground 220 feet wide by 198 feet wide, contains 1 acre.

A plot of ground 440 feet wide by 99 feet wide, contains 1 acre.

A plot of ground 110 feet wide by 369 feet wide, contains 1 acre.

A plot of ground 60 feet wide by 725 feet wide, contains 1 acre.

A plot ot ground 120 feet wide by 363 feet wide contains 1 acre.

A plot of ground 240 feet wide by 181½ contains 1 acre.

One acre contains 160 square rods; 4,840 square yards 53,560 square feet.

One rod contains 30.26 square yards; 272.25 square feet.

One square yard contains nine square feet.

THE SIDE OF A SQUARE TO CONTAIN

One acre—208.71 feet, 12.65 rods, 64 paces.

One-half acre—147.58 feet, 8.94 rods, 45 paces.

One third acre—120.50 feet, 730 rods, 37 paces.

One fourth acre—104.36 feet, 6.32 rods, 32 paces.

One eighth acre—73.79 feet, 4.47 rods, 22½ paces.

DISTANCES FOR PLANTING TREES, ETC.

Apples, standard, 25 to 33 feet; apples, dwarf, 5 to 8 feet; pears, standard, 20 feet; pears, dwarf, 8 to 10 feet; peaches, headed back, 12 feet; cherries, standard, 20 feet; cherries, dwarf, 8 to 10 feet; plums, standard, 15 feet; plums, dwarf, 8 to 10 feet; quinces, 5 to 8 feet; grapes, 10 to 12 feet; gooseberries and currents, 4 feet; raspberries, 4 feet; blackberries, 6 to 8 feet; strawberries, 2 feet by 15 inches.

For the above distances, the following is the number of trees required for an acre :

One foot by 1.3, 17,424 plants; at 4 feet apart each way, 2,720 trees; at 5 feet apart each way, 1,742 trees; at 6 feet apart each way, 1,200 trees; at 8 feet apart each way, 680 trees; at 10 feet apart each way, 430 trees; at 12 feet apart each way, 325 trees; at 15 feet apart each way, 200 trees; at 18

feet apart each way, 135 trees; at 20 feet apart each way, 110 trees; at 25 feet apart each way, 70 trees; at 30 feet apart each way, 50 trees; at 33 feet apart each way, 40 trees,

QUANTITY OF SEED REQUIRED FOR AN ACRE.

Wheat, 1¼ to 2 bushels; rye, 1½ bushels; oats, 3 bushels; barley, 2 bushels; peas, 2 to 3 bushels; white beans, 1½ bushels; buckwheat, ½ bushel; corn, broadcast, for fodder, 4 bushels; corn, in drills, for fodder, 2 to 3 bushels; corn, in hills, 4 to 8 quarts; broom corn, ½ bushel; potatoes, 10 to 15 bushels; beets, 3 lbs.; carrots, 2 lbs.; ruta-baga, ¾ lb.; millet, ¼ bushel; clover, white, 4 quarts; clover, red, 8 quarts; Timothy, 6 quarts; orchard grass, 2 bushels; red top, 1 to 2 pecks; Kentucky blue grass, 2 bushels; mixed lawn grass, 1 to 2 bushels; tobacco, 2 ounces.

QUANTITY OF GARDEN SEEDS TO PLANT.

Asparagus.—One ounce produces 1,000 plants; requires a seed-bed of about 12 feet.

Asparagus Root.—1,000 plants, bed 4 feet wide and 225 feet long.

Beans.—One quart plants from 100 to 150 feet of row, or 150 to 200 hills.

Beets.—One ounce plants, 150 feet of row.

Broccoli.—One ounce gives 2,500 or 3,000 plants; requiring 40 square feet of ground.

Brussels' Sprouts.—Same as broccoli.

Cabbage.—Early sorts, the same as broccoli; the later require 60 feet of ground.

Cauliflower.—The same as late cabbage.

Carrot.—Three or four pounds to the acre; one ounce to 150 feet of row.

Celery.—One ounce gives 7,000 or 8,000 plants; requiring 80 feet of ground.

Cucumber.—One ounce for 150 hills.

Cress.—One ounce sows bed 16 feet square.

Egg Plant.—One ounce gives 2,000 plants.

Endive.—One ounce gives 3,500 plants; requiring 80 feet of ground.

Kale.—Same as broccoli.

Leek.—One ounce gives 2,000 plants; requiring 60 feet of ground.

Lettuce.—One ounce gives 7,000 plants; requiring seed-bed of 120 feet.

Melon.—One ounce for 120 hills.

Nasturtions.—One ounce sows 23 feet of row.

Onion.—Four or five lbs. to the acre; one ounce of seed sows 200 feet of row.

Okra.—One ounce sows 200 feet of row.

Parsley.—One ounce sows 200 feet of row.

Parsnip.—One ounce sows 250 feet of row.

Peppers.—One ounce gives 2,500 plants.

Peas.—One quart of smaller sorts sows 120 feet of row; of larger, 200 feet of row.

Radish.—One ounce to 100 feet.

Salsify.—One ounce to 150 feet of row.

VALUE OF FOOD FOR DOMESTIC ANIMALS.

The figures giving the number of pounds of any one substance to be equal to the quantity given of any other—the results of experiments:

Good hay, 100 lbs.; good clover hay, 95 lbs.; rye straw, 355 lbs.; oat straw, 220 lbs.; potatoes, 195 lbs.; carrots, 280 lbs.; beets, 346 lbs.; ruta-bagas, 262 lbs.; wheat, 43 lbs.; peas, 44 lbs.; beans, 46 lbs.; rye, 49 lbs.; barley, 51 lbs.; Indian corn, 56 lbs.; buckwheat, 64 lbs.; oil cake, 64 lbs.

WEIGHT OF GRAIN.

Wheat is 50 lbs. to the bushel in all the States, except Connecticut, where it is 56 lbs.; rye is 56 lbs. in nearly all the States; corn, 56 in nearly all, but 58 in New York; oats, 32 lbs.; barley, 48 lbs.; buckwheat, 46 to 50, but mostly 48 lbs.; clover seed, mostly 60 lbs., but 64 in Ohio and New Jersey; Timothy, 44 lbs.; flaxseed, 50 lbs.; potatoes, 60 lbs.; beans, mostly 60, but 62 in New York, and 56 in Ohio; blue grass seed, 14 lbs.; hemp seed, 44 lbs.; dried peaches, 28 to 33 lbs.; dried apples, 22 to 28 lbs.

CONSUMPTION OF HAY.

The hay consumed by different animals does not vary greatly from 3 lbs. daily for each hundred pounds of the animals. The following table is the result of various experiments, by different persons, and will be useful for farmers who wish to determine by calculation, beforehand, how their hay will hold out for the winter, 500 cubic feet of Timothy hay, in a full bay, being about one ton :

Working horses, 3.08 lbs.; working oxen, 2.40 lbs.; milch cows,—Boussingault's,—2.25 lbs.; milch cows,—Lincoln's,—2.40 lbs.; young growing cattle, 3.08 lbs.; steers, 2.84 lbs.; dry cows, 2.42 lbs.; pigs, estimated, 3.00 lbs.; sheep, 3.00 lbs.

TO MEASURE GRAIN IN THE GRANARY.

Divide the cubic feet by 56, and multiply by 46, and the result will be struck measure.

TO MEASURE CORN IN THE CRIB.

Multiply the length, breadth and height together, in feet, to obtain the cubic feet; multiply this product by 4, and strike off the right figure, and the result will be shelled bushels, nearly.

UNITED STATES BUSHEL AND GALLON.

The United States bushel is 2,150.40 cubic inches.

The gallon 231 cubic inches.

The dry measure gallon, or one-eighth of the bushel, is 258.8 cubic inches.

WEIGHTS OF A CUBIC FOOT.

Of various substances, from which the bulk of a load of one ton may be easily calculated :

Cast-iron, 450 lbs.; water, 62 lbs.; white pine, seasoned, about 30 lbs.; white oak, seasoned, about 52 lbs.; loose earth, about 95 lbs.; common soil, compact, about 124 lbs.; clay, about 135 lbs.; clay, with stones, about 160 lbs,; brick, about 125 lbs.

BULK OF A TON OF DIFFERENT SUBSTANCES.

23 cubic feet of sand, 18 cubic feet of earth, or 17 cubic feet of clay make a ton; 18 cubic feet of gravel, or earth, before digging, make 27 cubic feet when dug, to the bulk is increased as three or two.

EXTEMPORE MEASURE.

A box 4x4 inches square, 3.6 inches deep, will hold one wine quart, 57.75 (—0.15) cubic inches.

A box 5x5 inches square, 4.6 inches deep, will contain half a wine gallon, 115.5 (—0.5) cubic inches.

A box 24x16 inches, 28 inches deep, will contain one barrel, (large whisky barrel), 10.752 cubic inches.

A box 8x8 inches square, 8.4 inches deep, will contain a peck, 537.6 cubic inches.

A box 16x16 8 inches, and 8 inches deep, will contain one bushel, 2,150 (0.42) cubic inches.

The above measurements are given in the army regulations, and many more might be easily added, it being simply necessary to find three numbers which, when multiplied together, will give as a "product" the number of cubic inches required for any desired measure. The dimensions should be such that a box made in accordance with them will be of a convenient form.

A wine gallon contains 231 cubic inches; hence a box 22x21 inches will contain one wine gallon for each inch of depth, and may be made as deep as is desirable.

Any one able to use a saw, hammer and plane, and square, with some good, clear, white pine inch-boards, may easily make such boxes. If they are found to hold too much, their capacity may be reduced by planing off the top, or by cutting a piece of wood, containing exactly the number of square inches which the measurement shows to be in excess, and nailing inside, but against one side.

HOUSEHOLD WEIGHTS AND MEASURES.

Wheat flour, 1 pound is 1 quart.

Indian meal, 1 pound 2 ounces is 1 quart.

Butter, when soft, 1 pound 1 ounce is 1 quart.

Loaf sugar, broken, 1 pound is 1 quart.

White sugar, powdered, 1 pound 1 ounce is 1 quart.

Best brown sugar, 1 pound 2 ounces is 1 quart.

Eggs, average size 10 are 1 pound.

LIQUID MEASURE.

Sixteen tablespoonful are half a pint.

Eight tablespoonful are one gill.

Four tablespoonful are half a gill.

A common sized tumbler holds half a pint.

A common size wineglass holds half a gill.—*Rural Carolinian.*

THE DIFFERENCE.

Two lawyers, living in the same village, married about the same time, and commenced business the same year. Each bought a lot of several acres in the suburbs of the town, and erected dwellings about the same size and at about a like cost. We shall call them for convenience, Mr. Doe and Mr. Roe. The first named gentleman built his in the style of half a century ago—chimneys on the out side—close, short gables, and painted it red. Around it he made a common rail fence, enclosing only about a half acre in yard; the balance of the land was put in corn. Not a tree, shrub, vine, plant, or bush was set out. To get to his house you had to *climb a fence.* Mr. Roe built a modern cottage, steep roof, with gothic windows, doors, and verandah; painted it a soft stone color. The chimneys were built in the centre, on each side of a hall ten feet wide. He enclosed one acre in yard with a neat plank fence, painted white; one acre was fenced off as a vegetable and small fruit garden, with sawed picket fenc-

ing; one acre was hedged around with osage orange, in which were planted peaches, apples, cherries, plums, pears, etc., the first spring after building.—The yard was handsomely set in evergreens, ornamental shrubbery, trees, and flowers. A grape trellis, planted with early, medium, and late grape vines, crossed the garden lot in both directions. A woodbine was planted to cover the verandah. Strawberries, raspberries, currents, gooseberries, blackberries, etc., adorn the garden squares, and vegetables show temptingly from the grounds to all who pass the highway that runs by it.—Eight years have elapsed since these houses were built. Behold them now. The house of Doe stands fully exposed to the summer sun, the fall winds, and the winter blasts; not a tree or shrub to break the terrible monotony; no tree to cast a shade on his hot walls; no fruits to adorn his table; no flowers to beautify his home. He has been offered two thousand dollars for his "place," and thinks he will sell at that price. The "home" of Mr. Roe is now half hidden away in the deep recesses of the maple and dogwood, the apple and cherry trees. The woodbine clambers lovingly over his windows and around his verandah. The luscious grape, purple in the autumn haze, look tempting on the trellis. The strawberry and other small fruits, in their seasons, are a feast to family and friends. The orchard securely shut out by the beautiful osage hedge from pilferers and stock, gives golden and crimson treasures, summer, fall and winter. The thousands of blossoms on the border of rose and dahlia, and violet and tulip, and lily, each in its season, invite not only the honey-bee, but the eye of all who pass, to feast upon their beauty, while the air is redolent of sweet odors from honey-suckle and thorn. The dense foliage affords a home for hundreds of wild birds that come from thicket, brake and glen, and mountain, to build their nest, rear their young, and sing their spring and summers away in undisturbed enjoyments.—Mr. Roe has *refused* five thousand dollars for his "home," and says "it is *not* for sale!" Have I shown you the "*difference.*"

This is no fancy sketch, but a tale of "real life," such as the *writer* of this knows from being familar with the facts in each case, and were it not *boasting*, would say that he is the "husband of the wife of Mr. Roe." The trees, vines, plants, etc., were the only extra cost of his premises over those of Mr. Doe, and less than one hundred dollars bought all. Nature and time did the balance, and these have given him a clear gain, according to the above figures, of *three thousand dollars*—the difference in the market value of the two homes. Go and do as Roe did.—*North Western Farmer.*

RECREATION NECESSARY.

We labor and labor, but there is just as much necessity for recreation as for labor. We cannot live without it; not even the laboring man.

Exercise sf all well enough; but it must be the right kind. The mind as well as the body wants exercise.—But it wants something else, as well as the body; it wants a change; it wants to get into a new channel; get new life infused into it. Thus it will

rest the limbs to labor, with the inactive man. It will rest and strengthen the mind to divert it, give it as we said new life.

We should lay out our plans for recreation as well as for work. There never was a truer saying than that "all work and no play makes Jack a dull boy."

Dyspepsia *settles* upon people. If they stir about and act, mentally and physically, there is no chance for it to do this. So the blues, *ennui*, and tedium may all be dissipated in this way. They are but the same one general thing, bred by doing nothing, or doing only one thing.

We must get out of the one rut, if we have been in that alone, and taste the variety of life. Man was made for it; it is the habit from time immemorial, and cannot be dispensed with. With it comes health and enjoyment. F. G.

FARMERS should not rely upon a sense of smell in the purchase of manures. Prof. Antisell, of Washington, the able and accomplished chemist to the department of agriculture, says:

The sense of smell is a very unsafe test of the value of manure. Two or three dead cats will scent a ton of spurious super-phosphate to an intolerable degree, while the pure article is nearly inordorous, of a sour taste. His statement also shows our liability to mistake bulk for value, and confirms opinions of scientific men, so often given, that the sewerage of cities, in the common system of drainage, is practically worthless for agricultural purposes, because too bulky to pay freight.

SPENDING MONEY.

To earn money is easy compared with spending it well; anybody may dig up potatoes, but it is not one woman in ten that can cook them. Men do not become rich by what they get, but by what they save. Many men who have money are short of wit as a hog is of wool; they are under years of discretion, though they have turned forty, and make ducks and drakes of hundreds, as boys do of stones. What their fathers got with rakes, they throw away with shovels. After the miser comes the prodigal. Often men say of the spendthrift, his own father was no man's friend but his own; and now the son is no man's enemy but his own; the fact is, the old gentleman went to hell by the lean road, and his son has made up his mind to go there by the fat.—*John Ploughman's Talk.*

GREASING WAGONS.

Few people fully appreciate the importance of thoroughly lubricating the axles, etc, of wagons and carriages, and fewer know what are the best materials and the best methods of applying them. A well made wheel will endure common wear from ten to twenty-five years, if care is taken to use the right kind and proper amount of grease; but if this matter is not attended to, they will be used up in five or six years. Lard should never be used on a wagon, for it will penetrate the hub and work its way out around the tenons of the spokes, and spoil the wheel. Tallow is the best lubricator for wooden axle-trees, and castor oil for iron.—Just grease enough should be applied to the spindle of a wagon to

give it a light coating; this is better than more, for the surplus put on will work out at the ends, and be forced by the shoulder-bands and nut-washers into the hub around the out-side of the boxes. To oil an axle-tree, first wipe the spindles clean with a cloth wet with spirits of turpentine, and then apply a few drops of castor oil near the shoulder and end. One teaspoonful is sufficient for the whole.

CULTIVATION OF THE PEANUT.

Though the peanut has been cultivated in Virginia to some extent from a remote date, it is only since the war that the crop has become of primary importance in the section of the State peculiarly adapted to its production. The greater part of Eastern Virginia was by turns, occupied by both of the contending armies; and as nearly every farmer raised peanuts enough for his family, and some to spare, their merits became extensively known among the soldiers; so that when the armies were disbanded, a knowledge of them was carried to every part of the country. It is doubtless to this cause, more than any other, that we are to ascribe the extraordinary impulse given to their culture within the last few years. So rapid has been its extension that the crop of each successive year has been threefold greater than that of the year preceding, and at prices fully maintained. The crop of 1868 in Virginia is estimated to have aggregated about three hundred thousand bushels, the average price of which was about $2.75 per bushel. Such enormous profits in the present depressed condition of our agriculture are well calculated to keep up the same ratio of increase for 1869, so that the product might be safely estimated at a million of bushels, if it were not that many of the new planters have embarked in the business without an adequate knowledge of the conditions necessary to success.

The preparation of the soil, however, is shrouded in no mystery, while the subsequent culture is almost as simple and scarcely more expensive than that of corn. This may be inferred from the fact that some planters put as much as a hundred acres in peanuts, and not a few from thirty to fifty acres, in addition to other crops. To attain the best success the planter should not be lacking in any one essential, and in order, therefore, to treat the subject intelligently, it will be presented under several heads.

SOIL.

Any soil that can be put in a friable condition, and kept in that state, will produce peanuts; but that which is best adapted to their growth is a light, gray soil, without being very sandy. The color of the pods always partakes of the color of soil; and as the brightest pods always bring the most money, so the gray land is to be preferred. When harvested they are perfectly clean, scarcely a particle of soil adhering to them. Not so with red or chocolate colored lands. They leave a strain on the pods, of which they cannot be divested even by washing—a practice frequenty restored to for the purpose of getting a fancy article. When taken to market the bright nuts will command from ten to fifteen cents more per bushel than the brown, though equal in all other

respects. The gray soil is therefore to be selected when there is freedom of choice, but the brown soil, when of the right texture is equally productive.

In choosing a site for planting, reference should be had to the crop of the previous year. Peanuts require a clean soil; they will follow any hoed crop to advantage, with the exception perhaps of sweet potatoes. Corn land is generally preferred. In tide-water Virginia much of the land was heavily marled in former years, and whenever this is the case an important and perhaps the chief requisite to success has been already provided. The peanut will not fruit except on a calcareous soil. The vines may grow with the greatest luxuriance, covering the whole ground, but in the absence of lime or marl the pods do not fill: they turn out to be nothing more than what is popularly called "pops." If, then, the land has not been previously marled or limed, it will be necessary to apply, say a hundred and fifty bushels of marl, or fifty bushels of lime, to the acre. The kind of lime chiefly used of late years is burned oyster shells which may be had in abundance in all our towns. It is applied in either of several ways, according to the convenience of the planter, and with about equally good effect. If there is any choice, spreading broadcast is perhaps the best, to be done before the land is ploughed; in which case the quantity should be about fifty bushels to the acre. A favorite mode, where a large surface is to be planted, is to strew in the lime in a furrow over which the bed is to be raised for planting. In this case a less quantity will answer, by reason of its being more concentrated—say twenty bushels. Other planters, again, who are hurried in their work, spread the lime over the beds after the crop is planted, at the rate of about thirty bushels to the acre. Either mode is attended with good success; but wherever it is practicable to have a choice of land that has been sufficiently marled or limed in former years, and preserved by judicious culture, the best results are found to follow. In such cases the yield not unfrequently reaches a hundred bushels to the acre. Last year the writer was told by a planter of the highest character that on twelve acres of such land as has been just described, he sold fourteen hundred bushels of nuts of prime quality besides saving an ample supply for seed. The product ranges from the quantity stated down to twenty-five or thirty bushels to the acre, according to the skill, or want of skill, of the planter—a fair average of the whole being estimated at fifty bushels.

Few persons make peanuts part of a regular system of rotation, but the pre-eminent success of a gentleman who has followed the plan is worthy of special reference. Mr. Henry M. Butts, of Southampton county, Virginia, has for years pursued the following course: The lot intended for peanuts, say next year, has been seeded in stock peas this year, the vines to be ploughed in some time in September. The vines afford a great quantity of vegetable matter, which becomes thoroughly decomposed by the time for planting the crop. When the season for planting is at hand, the ground is re-ploughed and laid

off, and ten bushels of lime and a hundred and fifty to a hundred and seventy-five pounds of superphosphate strewn in the furrows to be ridged over. The year following peanuts the land is planted in sweet potatoes, with a liberal dressing of stable manure. The third year it is laid down in stock peas again, to be followed by peanuts as before, always repeating the lime and superphosphate. The crops of Mr. Butts averaged, one year with another, not less than a hundred bushels to the acre. Last year from ten acres, he sold thirteen hundred bushels of prime peanuts, entirely exempt from "pops," and worth three dollars per bushel.

CULTIVATION.

Having selected the ground, it is to be ploughed with a one-horse plough in March or April to a depth not exceeding four or five inches. The advantage of shallow culture will be apparent from the fact that the peduncles continue to penetrate the earth until a firm bed is reached on which to deposit the nut; and the still further fact of the increased facility afforded in harvesting, as will appear when we come to treat of that branch of the subject.

About the 10th to the 20th of May is the time for planting. If the land is thin and needs manuring, open furrows three feet apart, and strew in a hundred and twenty-five pounds of Peruvian guano, or from a hundred and fifty to two hundred pounds of superphosphate of lime. The former is generaliy used, because of the greater certainty of getting a pure article, but nothing can be better than the latter when well prepared. The furrow is then to be ridged over and the whole surface thrown into three feet beds, which should be reduced to within two or three inches of the general level of the field. Then mark off the rows, and at distances of eighteen inches plant two seeds, covering them an inch and a half deep, not more.

In ten days to two weeks, according to the weather, the young plants begin to come up. As it is very important to get a good start, the missing hills should be re-planted at the earliest moment. It is the custom of some planters to put an extra quantity of seed in every forth or fifth row, to furnish plants for transplanting, if needed; if not needed, they can be thinned out.

As soon as the grass makes its appearance give a light ploughing, throwing the earth from the vines, and following with the hoe, thoroughly removing all the grass from the row. Plough again as soon as the grass re-appears, this time using a double shovel or cultivator, and the hoe as before directed. If the season should prove to be very wet a third working may be necessary, making use of the cultivator and hoe again.

Next comes the time for laying by, the vines having extended nearly half way across the space between the rows. This is done by running a mold-board once in the middle between the rows, and drawing the earth up to the rows with the hoe, care being taken not to cover the vines and to disturb their position as little as possible, as the fruit will now be forming. It will be necessary also to guard against making the bed too high. When there is grass in the row it must be pulled up by hand.—

Soon after this the vines will cover the whole ground, and repress every other growth, unless it may be a chance weed that escaped notice at the former working.

HARVESTING.

The time for harvesting the crop is from the 15th to the 30th of October, immediately after the first frost. When the crop is forward, or when it is an object to get a portion of it early in market, the operation may be commenced in the latter part of September; but the longer the vines continue to grow, the greater will be the number of sound pods. Select a time when the weather is settled and favorable, and with three-pronged hoes loosen the vines along the rows. Hands follow the digger, pull up the vines, shake the dirt from them, and leave them in the same place. In dry weather they will be sufficienty cured in two days to be shocked. Showery weather, though it may somewhat delay the curing, does no injury.

One of the advantages of shallow culture becomes apparent in harvesting. When the fruit is deposited only a few inches below the surface, the vine is detached from its position with little or no loss; when the depth is greater, the stems or pedicles are liable to be broken off.

In shocking, provide stakes seven feet long, made sharp at both ends; then lay two fence rails on the ground as a foundation, but with supports underneath to afford free access to the air. The stakes are stuck in the ground at convenient intervals between the rails, the stacks built up around them, and finished off by a cap of straw to shed the rain. The diameter of the stack is made to conform to the spread of a single vine.

After remaining about two weeks in the stack the picking should be begun, taking off none but the matured pods. These are to be carried to the barn, and prepared for the market by completing the drying process, and then fanning and cleaning.

The most tedious part of the work is the packing. An expert discriminates at a glance between the mature and immature pods, but cannot pick more than two and a half or three bushels per day. A machine to perform the operation would be a most valuable invention. Unless the management in the barn is carefully conducted, there is great danger, where there is much of a bulk, that the peas will become heated and mouldy. The condition in which the early deliveries are often received at market renders this caution quite necessary. In fact, there is as much slovenliness in the handling of this crop as there is in regard to any other; perhaps more, for the reason that so many inexperienced persons engage in the culture every year. Until the pods are thoroughly seasoned, the bulk should be frequently stirred and turned over.

A certain classification, in respect to quality, obtains in peanuts as in every other article ef agricultural produce. The descriptive terms in general use are "inferior," "ordinary," "prime," and "fancy;" but these are not so definite as to admit of no intermediate grades. Assuming *prime* to be the standard, and that the prime are $2 75 per bushel, then *inferior* will be worth, say $1 00 to $1 50; *ordinary*, $2 00 to $2 50, and *fancy*,

$3 00. Seed peanuts always command an extra price, ranging from $3 25 to $3 50. These were the current prices for the crop of 1868.

VARIETIES.

There are two very distinct varieties of the peanut, known respectively by the names of the *Virginia*, and the *Carolina* or *African*. The diversity between them, however, does not amount to a specific difference, the chief characteristics being that the one has a large pod and bean, and the other a small one. The Virginia is cultivated almost exclusively for eating, while the Carolina is principally used for the manufacture of oil, which cannot be distinguished from olive oil, and is, accordingly, sold as such. The standard weight of the Virginia peanut is twenty-two pounds to the bushel; that of the Carolina twenty-eight pounds. In the markets they are always sold by weight.

SEED.

A matter of primary importance is to provide seeds of good quality for planting; and in order to be assured of their excellence, the planter should either raise them himself, or buy them of a person on whose fidelity he can rely. If, after the vines are dug and they are lying in the field, they should be exposed to frosty weather, the germinating principle would be destroyed or impaired. As a merchantable article, however, their value is not at all affected. Neither should the nuts become the least heated or mouldy; nor should they be picked off the vines while wet, or before they are thoroughly cured. It is obvious, therefore, that the most careful attention is requisite in this matter. Previous to planting, the pods should be carefully shelled and every faulty bean thrown out; not even the membrane inclosing the seed should be ruptured. It takes about two bushels of peanuts in the pod to plant an acre.

PROFITS.

The relative profits of peanuts and other leading crops of the district of country in which they are severally grown may be determined with a near approximation to accuracy. Asssuming that the average yield of cotton to the acre is half a bale, or two hundred and twenty-five pounds, and that it is worth twenty-five cents a pound, the aggregate proceeds would be $56 25. An average crop of tobacco does not exceed six hundred pounds, nor the average price $10 00 per bushel; the gross proceeds would, therefore, amount to $60 00. An average crop of peanuts is fifty bushels per acre, which may be put at $2 50 per bushel, aggregating $125; so that it appears that at one-half the price, or one-half the product, the peanut is as profitable as either cotton or tobacco. So far as regards the expense of preparation and culture, the difference between peanuts and cotton is inconsiderable; but the picking of the cotton is by far more tedious and laborious than gathering the peanuts. As to tobacco, the crop is never off the hands of the planter, and the cultivation is the most expensive of the three, leaving, therefore, less clear profit.

CONCLUDING REMARKS.

The peanut crop is justly considered exhausting, but not more so, it is believed, than either of the others with which we have compared it. Planters who have been longed in the culture

say that the same ground may be planted for a succession of years, provided the vines are restored to the soil, and a moderate application is annually made of guano or other fertilizer. Cotton, under a similar system, may be planted on the same land for an indefinite period without diminution of quantity.

The vines of the peanut make a large quantity of very nutritious provender, which is eaten with avidity by cattle. If the crop is dug before frost, it is equal in value to any other forage plant. As the pods are picked off, the vines should be placed under shelter, secure from the weather.

On account of the profit of the crop, it has taken the place of tobacco to a considerable extent in places where the soil is adapted to it. This is the case in the large tobacco-growing counties of Amelia, Nottoway, Halifax and Brunswick, besides others of less note. How far north the culture may be extended to advantage is at present a matter of conjecture; but in the tide water district of Maryland, and also in Delaware and the southern part of New Jersey, it well deserves a trial.—*Report of Commissioner of Agriculture for* 1868.

BOOK FARMING---ITS LIGHTS AND ITS SHADOWS.

If there is a subject which is misunderstood and misrepresented among the masses of farmers and farm workers; among those who have long tilled the land, and those who are just beginning to till it; if, among all the mysteries which perplex the mind of the husbandman there is one preeminently obscure, it is the subject and the mysteries indicated by the first two words of this article, and so strong has the prejudice against book farming become in many minds, that it is looked upon by these minds as a new and different system, organized under a new and specially distinct class of principles, connected, it is true, with the cultivation of the soil, but in no manner associated with the practical operation of a successful and profitable husbandry. *Processes* have changed so greatly within the last fifty, and even twenty-five years, and so rapidly within the last fifteen years; so many implements and machines have been introduced during that time for which such remarkable qualities have been claimed, and which many of them have upon trial failed to exhibit *profitably*, that he who cut his grain with a sickle might have been justified if he paused, startled and incredulous, unable to comprehend these vigorous leaps of inventive intellect, or the stranger statements of the teachers of chemistry as agriculture bound the disciples of this deep and mystic art to her chariot, and made them thenceforth her loyal champions.

Within the space allotted to this article we canuot enumerate the advantages which the development of the sciences has conferred upon the agriculturist nor mention, in detail, his departure from old processes and the stricter conformity of his plans to the new. Our purpose is to exhibit a few phases of the shadow as well as the light which these developments cast upon the labors of the tiller of the soil. There are two classes to whom book farming presents itself under a strange aspect, and to prevent these two classes from the errors into which they frequently fall, is the

object for which these remarks were designed. One of these classes is composed of the inexperienced, who move into the country from cities and towns, from the trades and professions, to conduct a business with whose operations they are only partly acquainted, and of whose details they are entirely ignorant. The knowledge of this class of its respective vocations, as well as of the world and its transactions, is mostly derived from books and periodicals; these have been their guide and instructors in the past, and relying still upon that class of teachers, they select a class of literature adapted to the requirements of their new vocation, expecting thereby to supply the deficiency of their own education. Unwilling to ask advice from those qualified to give it the individual commences operations upon the slender resources of his inexperience and a monthly periodical, and this capital invested in any other business could end in nothing but a certain failure. He reads an account of a remarkable crop of corn obtained from a certain number of acres. The account states the land was plowed twelve inches deep in the fall, harrowed twice in the spring, and cross-plowed same depth, harrowed and cultivated again several times, and planted in drill in rows thirty inches apart, nine inches apart in the rows. Without ascertaining any particulars concerning the locality, climate, soil or seed, he follows these directions minutely; plows land a foot deep that had never been worked at half that depth, plants in drill on a side hill on which it will be impossible to throw the dirt to the upper row, and uses a seed to which belongs a great luxuriance of foilage and strong growth, and plants nine inches apart a variety which needs four feet for its successful cultivation. He reads that the land should be kept well stirred, and stirs his land constantly, with very little or no attention to the state of the land or the dry weather, or to circumstances which always modify any specific declaration concerning the cultivation of the soil.

His land for small grain is prepared according to a certain formula, good perhaps when climate, soil and seed are adapted to it, but entirely deceptive under altered circumstances. He reads of the sixty pound cabbage, the two feet beet, the five feet pea, the variegated cucumber, the new strawberry, the big potato and the awful squash, and smiles in the fullness of his prophetic soul as he looks in conscious superiority upon the less lofty flights in agricultural agility of his less gifted neighbor.

Relying upon his books for all essential directions in regard to the main operations, he is lost at sea when it comes to the details. If his land is heavy he works it too wet, and the burning sun bakes it solid.—If light, he works it too dry in the drouth of the summer months. Plants that should be thinned out are left too thick, and those that do not require it are left too thin. He pulls his beets when the ground is like a a brick, and sets out his cabbage plants at noonday unsheltered, and laughs heartily at the neighbor's folly of putting a big burdock leaf over the tender plant to keep it cool. He provides himself with a variety of expensive implements and apparatus, which,

if properly used, would be invaluable adjuncts to his onerous labors.

Seed time passes and harvest comes but not for him. The land is too rough and the grain too low to think of cutting it. The garden is a good exhibition of variety and industry, but a lamentable proof of the result of misdirected energies. The striped bug has eaten up all his watermelons, canteloupes and cucumbers; the awful squash did not come up, and the big potato was planted too deep to be heard from thenceforth.

The corn crop shows only what good small fodder can be raised by that process of cultivation. These are the errors of the inexperienced.

The other class commits the same errors in quality but not in quantity. Impressed by the necessity of a better mode of tillage and the forcible reasoning the individual of this class meets of the superiority of a certain mode, he adopts it, but upon too large a scale for an experiment. He deviates too largely for a commencement from the practices to which he has been accustomed, and with blind obedience to details picked out here and there, he neglects to study the principles which the system as a unit —a harmonious whole—presents to its followers. Results to him are necessarily unsatisfactory, and he settles down into the old rut, seeing no medium between the two extremes, and becomes ever after a determined enemy of book farming.

The individual of the first class, discouraged, not so much by the pecuniary loss, which has been very heavy, as the vast discrepancy between labor, skill and his outlay of energy—and results, concludes that an explanation of the mystery will not justify further efforts, and abandons his undertaking.

Now, what bearing do the failures of these parties have upon the correctness of the principles of scientific agriculture? No more than the failure of a merchant would have upon the principles of mercantile success, if he brought that failure upon himself by neglect of those principles; and as an illustration of my meaning, I can do no better than quote here the declaration of your modest but able and profound correspondent, "Patuxent Planter," in regard to the principles of success in agriculture. "The same ability, energy, capacity and industry, which will make a man successful in any other calling will make him successful in agriculture, and without these he will fail in this as in any other vocation."

Does a man launch boldly upon any trade or profession or pursuit without previous experience and discipline? Can the lawyer, the physician, or the minister—the merchant, the mechanic, or the seaman—who spends years in preparation before entering upon the duties of his calling, reasonably expect immediate success in that art upon whose prosperity depends all arts; in that science to which all sciences contribute the stores of their acquisition, and to which they look as the foundation and pillar of their own prosperity?

It is true that among the immense quantity of matter that is constantly being published and circulated by the agricultural press, errors do occur.—Every investigating reader of agricultural matter has discovered statements, which, if not false in fact, were con-

trary to his own experience; but in this as in other things, too much faith, which often is another word for credulity, is a great barrier to true progression.

Applied, then, to agriculture, the elements of success would interpret its teachings in no ambiguous language: it says, plow deep, but if the land has hitherto been plowed but four inches deep, plow a small land a half inch deeper; another one a half inch deeper still, and another one still deeper, and wait for the result. This will occupy a number of years, but the practical farmer has two objects in view; he must make the land profitable as well as rich. It is a matter of dollars and cents with him, and although land *could* be made better by more expeditious means, it could not be made profitably better by him in any other manner; and this gradual change in stock, seeds, tools, machinery and the processes of husbandry would not be productive of the regret and dissatisfaction which a violent and radical change generally produces; but the improvement should be constant.—Every season should witness better buildings, better tools, better stock and seed, better plans, and in the train of all these will follow better harvests and increased comfort on every hand, and if this gradual change could be general, American husbandry would soon cease to present the low and humiliating averages the statistics of our productions invariably exhibit.

To the beginner, we give a caution that would be unnecessary in regard to any other pursuit—for no one would think of directing the voyage of any other vessel without first learning from others the precise nature and locality of the obstacles to be encountered—plow and sow and reap precisely as your neighbor does, and should your judgment suggest any modification of their processes, let them be made with that caution, which, directed by sufficient energy, is, in agriculture as in other callings, the parent of success.—*D. L. in Maryland Farmer.*

WHAT DRAINAGE DOES.

Drainage removes stagnant waters from the surface.

Drainage removes surplus water from under the soil.

Drainage lengthens the seasons.

Drainage deepens the soil.

Drainage warms the under soil.

Drainage equalizes the temperature of the soil during the season of growth.

Drainage carries down soluble substances to the roots of plants.

Drainage prevents heaving out, freezing out, or winter killing,

Drainage prevents injury from drouth.

Drainage improves the quantity and quality of the crops.

Drainage increases the effects of manures.

Drainage prevents rust in wheat and rot in potatoes.

REMEDY FOR COLIC.—A correspondent, W. H. C. Price in the *Field, Turf and Farm*, says: "The recent death of Mr. Bonner's celebrated horse, Auburn, suggests to me the propriety of communicating to your readers a very simple and effective remedy for colic in horses. It is simply to drench them with a preparation of chlorine and permauganic acid, which can be procured at any drug store. I have used it myself, and known it used repeatedly, and have never known it to fail."

THE
Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S. DANCY, } Editors and Proprietors.
WM. A. HEARNE, - - Managing Editor.

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TO THE PRESIDENTS AND EXECUTIVE COMMITTEES OF THE AGRICULTURAL FAIRS IN NORTH CAROLINA.

We suggest to the consideration of the various Agricultural Fairs, the propriety of offering every inducement to enhance the productive capacity of every variety of soil in the various crops produced.

For instance, offer a liberal premium to the man who can raise the largest quantity of cotton, the various cereals and every other crop that is planted.

Let it be understood that each contestant shall choose his own ground upon which he is to make his trial, and to the next annual fair let it be understood that he is to bring up a written statement of his mode and management, detailing how much and what quantity of fertilizers, whether home made or purchased, and also an estimate as near as possible what the one acre, or more, (as he may choose) would produce when he commenced upon it.

We suggest that the soil be classed as follows : Swamp, loam, clay, subsoil and sandy. It would be well to offer a premium to the man who can raise and apply the largest quantity of compost to the plow.

Then the farmer who runs one plow will have an equal chance with the one who runs more.

Let this be done, and then the farmers will learn the maximum capacity of their soils and not until then.

There is no doubt in our minds that upon one-half of the best plantations, the same amount of corn, cotton and all other crops can be produced that are raised upon the whole. Let every farmer ask himself, if his land was well drained, plowed deep, manured and cultivated well, if he would not produce double what he has in the past.

We honestly believe there has never been by any farmer in the county of Edgecombe, one-third as much raised as could have been by a good system of high farming. Why is this ? It is simply because we plant too much. Take the same laborers

you work upon the whole, drain well, plow deep and manure heavily one-half, and you will make more than you do upon the whole.

You could then, with one-half of the team and laborers, after the crop was planted, turn your attention to improving the other half. Under a system of this sort, there is not a farm of any size in North Carolina that would not produce double in less time than four years.

Any intelligent farmer can see that he could, by adopting this course, increase the value of his real estate and make double or treble what he does does under the present management.

Let it be known to the young planters that no longer than one quarter of a century back, nine-tenths of the cotton lands of Edgecombe were thought to be too poor to think of raising cotton upon.

On what lands did our people then plant cotton? All who recollect that date, know full well that dung hills and newly planted ground were about all that were planted.

Why is it that large fields that were then considered worthless, and especially that section of the country where the land was thought good for nothing but turpentine and tar, are at present producing renumerative crops? About twenty-two years back, Messrs. S. P. Jenkins, Jas. S. Battle, John Garrett, Baker Staton and a few others, commenced raising compost, and in a short time, a spirit of rivalry sprung up, and the result was, in five years we often heard it remarked that such a person made a bale of cotton per acre where he could not have made as many seed as he planted without the marl and compost.

This spirit continued up to the war and but for the "late unpleasantness," by this time the crop of this section would have more than double the crop of 1860.

We now have a new system of labor and it behooves us more than ever to plant no land that will not pay under ordinary seasons.

Something is needed to stimulate the planters, and if one or more persons, in each county, can be induced to make an effort as above described and show that it will pay, in a short time the majority of farmers will follow.

DISTRIBUTING COMPOST.

The compost being ready, and the grounds in good order, we run our fields off into rows, the width of five rows; for instance, if we intend to have the rows three and a half feet wide, these rows are run seventeen and a half feet wide.

This makes twelve rows to the acre to put the compost in, then we check this ground according to the number of loads we have to put upon it; for instance, if we have one hundred and forty-four loads per acre, we check it seventeen and a half feet apart.

The advantage to be derived is, in checking you can have your compost placed more regularly than otherwise. After the compost is dropped in these checks, we commence running the cotton rows, and when done, there will be two rows on each sido of the fifth row which has the compost.

We then commence shoveling the compost into the drill with two men, one on each side of the compost row.

We have them to keep together, for if we allow one to go ahead of the other, the foremost one will very often

fail, or put too much in his drills, besides the one that goes ahead will not use that care he ought to in shoveling up his half of the loads, as he will strike into the heap where he can get with most ease his shovel full of compost, consequently the hindmost man will have to labor much harder as he will have each pile to clean up.

If you desire to spread your compost broad cast, it is best to have it run in checks or squares. You have often seen in farms, good and sorry spots, which originates from a bad distribution of the compost.

MILD WINTER.

The winter of '69 and '70 will be noted for mildness North and South. None of its predecessors, within our memory compares with it. Such a season is truly a blessing to the cattle, sheep, and hogs in that section of our State, which suffered so severely from drought last summer, and consequently has so short a supply of forage for its animals. We have had no regular winter weather until the cold snap beginning the 20th of February. The winter salads were as green and flourishing as if it were mid-summer; the early spring flowers got up from their winter nap early in February, but the beautiful innocents have been ruthlessly cut down by Sir John Frost in his recent visit to this mundane sphere.

Whether a mild winter foreshadows a good or bad crop, we are not wise enough to say. A great deal more, we suppose, than an average amount of necessary labor has been done on the farm up to date. Our fields are dotted with the inevitable compost heap, a striking characteristic of Edgecombe at this season, and an unusually large amount of ploughed surface appears, be-tokening the working spirit of our people, and that we are fully up to the date with the work of the year.

The winter has not only been mild, but the first two months were dry, admitting of all kinds of out-door labor, with comfort and convenience to both man and beast.

An old saying with farmers, "a dry winter is followed by a dry summer, vice versa," proves, we believe, in the main correct, but we are not sufficiently "out of the woods" at this date to say whether the winter, as a whole, has been wet or dry. We always hope for a dry summer in this latitude on the score of health and good crops, as it seldom or ever fails to bring us an abundant harvest of cotton and corn. So we look cheerfully at 1870 so far, and urge our planting friends to speed the good work of preparing their lands, cleaning out their ditches, making compost, in a word, have every thing in readiness by the corn and cotton planting season now so near at hand.

HORNED CATTLE--DIFFERENT MODES OF BREEDING

The best way of keeping up a herd of fine cattle has been the subject of frequent essays, addresses, &c., but is still apparently as far from being a settled question as ever. The "in and in system" of breeding, that is breeding from the same herd, has been pretty generally condemned and the cross system correspondingly lauded, but latterly, an able advocate, in the person of Dr. Breckenridge, of Kentucky, has appeared as the champion of the in and in system.

Our views and practice favored crossing, until we read the Dr.'s very conclusive and exhaustive article.—To those sill in doubt on the question, we respectfully refer them to a careful and unprejudiced perusal of Dr. B.'s essay, in our July number. He there treats the subject calmly and convincingly to our judgment. If the Bible theory be correct, (and we christians humbly bow to it as paramount authority) that the whole animal creation sprung from the ark, then there is no escape from the in and in system being the true and only system of breeding with all animals.

The most famous races of cattle known in the United States, are the Durham or Short Horns, and the Devons. The former are uniformly white and red, with short horns; the latterly invariably a deep solid red, with buff noses, a white tuff at the end of the tail and larger horns than the Durhams.

These famous races, we believe, were originated in England, and any one in this country with patience, perseverence and good judgment can do the same thing, if they are willing to devote a life time to it.

Several well-known flocks of sheep have been originated in this and other countries by a judicious system of selecting males and females adapted to the procreation of an improved or more perfect breed, and again selecting from these until the points aimed at in the judgment of the breeder are attained. When fully attained, the only secret about the subsequent management and keeping the herd of cattle or the flock of sheep up to the standard of the originator, is in the judgment of the one selecting the males and females. They should be sound and healthy, well-formed, good-tempered, and well-cared for. So far as our dull vision can penetrate the oft mooted question, relative to the breeding of animals, we honestly believe what we have above written, and we can't understand why each region of country can't originate its own cattle and sheep and hogs, which, being to the "manor born," ought to do better than those brought from a distance.

SOWING OATS AND PEAS TOGETHER.

This is the season for sowing that most valuable small grain crop, oats, and as labor saving is very desirable in every department of farm work, we ask our friends to make the experiment this spring on one or more acres of sowing peas at the same time they sow their oats. We are told that peas sown at this season, particularly the hardy varieties of the field pea, the red ripper and the small black, are in no danger of being killed, but will come up as soon as the weather becomes warm, and be ready to commence a vigorous growth, on land suited to them, when the oats are taken off. This being the case, every farmer desirous of using the pea as a fertilizer, will at once see the great advantage of sowing the two crops together, thus accomplishing at one sowing and one plowing, what is usually done at two plowings and two sowings. When you ask a farmer why he doesn't sow peas after his oats, rye or wheat, his usual reply is, I have't got the time; my cotton and corn need all the attention I can give them, at the time my small grain crop comes off. Now here is a chance to obviate the difficulty, and we hope the

experiment, cheaply done, will be tried at this season. We promise a report of results in our own farming, and trust we shall hear from others. We desire to inaugurate a system of self-sustaining fertilizers, and we know of nothing to carry out this object so promising of good results, cheap and quick, as the judicious use of field peas. When we can render our farming and planting operations independent of commercial fertilizers, we shall have attained a great end and the road to wealth and high farming will be plain.

CONTRIBUTIONS.

We are pleased to notice a slightly increased disposition on the part of our practical planting friends in this county, to favor us with a few words from their pens. We know we speak truly when we say that the views and ideas of Edgecombe farmers, are regarded with favor in many parts of the State, and we should be pleased to hear from them much oftener than we have done.

The results of Dr. Dicken's last years' cropping, told in a few plain words, (just the style we like to see used in telling anything), is worth reading, is worth trying to be followed and would be worth thousands to any who can successfully imitate the Dr. in his planting operations. Having broken the ice, we hope to hear from him again. His farm management would form a fine subject for an entertaining article, and we hope he will furnish it at no distant day.

Another correspondent from this county, hides his modesty behind his initials, "C. B. K.," and in this he commits a grave error. He is one of the most substantial citizens, and a most successful manager of a farm in all its varied details. His name in full would give strength to his views, both in and out of the county, and we trust we shall have the pleasure of again hearing from him over his full sign manual.

DOGS.

It is to be hoped that Congress will make it obligatory by law to have the number of dogs taken by the next census.

We would like to know how many there are in North Carolina, we mean bull dogs, curs, terriers, hounds, fices, male and female, separate.

Beyond a doubt, this race is on the increase, while sheep are on the decrease in Eastern Carolina.

If the number of dogs were known and the number of sheep, we think it would be the means of some Legislative action on them.

We hope the Legislature will pass a special tax upon dogs to pay their seven dollars per diem.

TO PREVENT LAND FROM WASHING.

In reply to our esteemed correspondent from Williamston, asking the most effectual manner for preventing land from washing, we would say that hill-side ditching and deep plowing are the remedies. To do the first well and to make a permanent thing of it, requires both practice and experience. The greater part of the labor can be done by a skillful plowman after the line of the drain has been marked out by an accurate eye.

When washes occur on gully undulating surfaces, we suppose deep plowing (and by this we mean eight to ten inches deep) would effectually stop them.

The views expressed in the following communication to the Raleigh *Sentinel*, with those contained in the accompanying petition, we need hardly assure the readers of this journal, meet our entire concurrence. We have endeavored all along, through the columns of the *Reconstructed Farmer*, to show the absolute necessity of a repeal of the most unjust and odious stock and fence laws now on our statute books, and we sincerely trust those of our fellow-citizens *who are interested in agriculture* will continue to press this matter upon the attention of our legislators until the passage of laws such as those asked for in the petition below is secured:

Halifax Co., Feb. 9th, 1870.

Mr. Editor: Will you be good enough to publish the annexed memorial to the Legislature on the subject of a *stock* and *fence law*, which was drawn up by direction of the Agricultural Society in this county, and if not inconsistent with your views, a few favoring remarks would no doubt aid the cause. The law is one very much needed, certainly in the Eastern portion of the State, where the stock are few, the farms large, and the fences numerous and burdensome.—We trust the Legislature will pass a *general* law regulating the matter over the State, but if (as has been hinted,) it leaves the decision of the question to the vote of counties or townships, then, as suggested by the *Reconstructed Farmer*, it should attach a qualification as to voters; for it would seem to be both idle and unjust, to leave the decision of a matter of such great importance, to the "promiscuous voice" of those who have no interest, care, or responsibility, directly or indirectly in the matter. We would suggest if they do pass such a law, that they provide, that only those be allowed to vote upon it who own land or stock.—But it is best that the law be mandatory and general, and in accordence with the spirit of the times, the wants of the country, the change in the system of labor, and the new improved methods of farming.

Most truly yours,

Many Farmers.

To the honorable, the Legislature of North Carolina:

The undersigned, citizens of Halifax county, respectfully represent to your honorable body that the laws at present in force, with regard to stock and fences, are injurious to the true interests of the State and people, are a heavy burden upon the agriculturist, act with great inequality upon different classes of citizens, discriminating in favor of the large stock raiser to the detriment of the small farmer and grain producer, are inimical to the progressive spirit of the age, to the advancement of improved stock and to the productive wealth and prosperity of the State, besides being an additional onerous tax to that already borne by the people.

Your memorialists believe, and do so assure your honorable body, that the cost of fencing the cultivated lands in Halifax county, so as to protect the crops from the incursions of free ranging and out laying stock, is equal to one-half the value of the lands enclosed and to the full value of stock so ranging at large; so that if the present laws were abrogated, and others passed requiring that the *stock* rather than the crops be fenced in,

the cost of making and repairing the fences now necessary and required, might be applied to the cultivation of larger areas of land, to the greater improvement of those already under cultivation, or to the purchase and breeding of better stock, and by so much increase the wealth, and improve the agriculture and stock of the State.

Your memorialists further represent to your honorable body that the agricultural products of the county, and they believe of the State, are as compared in value with the stock as twenty to one; and yet the interest of the twenty parts is made under the laws at present in force to succumb to and be taxed for the questionable benefit of the one.

Your memorialists further represent unto your honorable body that the proportion of the population of the county, and they believe of the State, interested in agriculture, as compared with those interested in stock, is as fifty to one—and yet, under the existing laws, the property and interests of this fifty are sacrificed to the doubtful advantage of the one.

And your memorislists further show unto your honorable body, that in those States and countries where improved systems of agriculture prevail, and where the breeding of improved stock is the practice, the first desire on the part of the people, and first step taken in encouragement on the part of the State, is the passage of laws such as those herein asked for.

Wherefore, your petitioners humbly pray your honorable body to take the foregoing matters into consideration, and pass such laws as may to your honorable body seem just and meet in the premises, and to the relief of your petitioners, and your petitioners will ever pray, etc.

AGRICULTURAL SOCIETY AND FAIR.

We resume our remarks on this important subject, and hope to be able to show the farmers of Edgecombe where some of the advantages of having an Agricultural Society, in the county, may be found.

We assume that it is a self-evident fact, one requiring no demonstrastration, and which cannot be controverted, that no planter, not even an Edgecombe farmer, can afford to produce cotton at twenty-five or even thirty cents, and purchase everything he consumes in the way of supplies, from abroad. He must either raise his meat, bread and stock on his farm, or his farming operations are a failure, no matter how well his cotton crop turns out, or the price he gets for it.

Just look at the subject, and see what many of our farmers are doing, and have done ever since, as well as before the war. They buy meat, corn, seed and manures, and every necessary article of family consumption from the North on time, paying as high as twenty-five per cent for the credit, hypothecating their prospective crop, and mortgaging their lands and other possessions as collateral security. With good crops, the result is, that after paying up their commission merchants, paying off their laborers, paying for their stock and implements and settling their store accounts at home, few have little if any money left from

the sale of their large crops of cotton, and in order to go on the next year they go through the same process of buying supplies on time, hypothecating crops, and mortgaging lands as before. Thus they go on from year to year, forgetting, or seeming to forget, that one partial failure of the crops or prices, would seriously embarrass them, and two bad years in succession, completely wind them up and put their earthly possessions under the auctioneer's hammer. We simply recall to the mind of the reader the experiences of 1867, and deem any further argument unnecessary to fortify the position we have taken; and as it is good in time of peace to prepare for war, it is prudent in Agriculture to so shape our system, that without seasons differing from anything known to history, a total failure of crops should be impossible, and so be prepared for poor cotton crops, or a fall in prices, either or both of which may come again at any season.

In the race of speedily acquired riches, we are over taxing our vital energies, exhausting our lands, or the means of improving them, adding little to our wealth, and neither beautifying our homes, surrounding our children with refining influences, or adding to our home comforts, but simply working from year to year like galley slaves for the benefit of speculators. How long can a people stand this—how long will our farmers, who, of all people should be free and independent, from the blind infatuation of avarice, submit to be mere hewers of wood and drawers of water ?

Now one of the benefits we promise from an Agricultural Society in Edgecombe, is a concentration of intelligent thought and discussion on this very subject of producing our own meat and bread, and we know the verdict will be in favor of home production, for many of our farmers long since saw and recognized the truth of what we have uttered above. Another is a co-operative effort in bringing about that system of Agricultural reform which the facts we have stated render imperative, and which we have all felt the times demanded, but which, without an organized effort, we have found it impossible to bring about.

The Society would of course have its place of meeting; rooms accessible at all times to any member, where he could meet his neighbors in an hour's social chat any public day on which he might happen in town. A library of such reading as is most interesting to farmers, can be begun from the exchange papers and magazines of the *Reconstructed Farmer*, and added to from time to time, as new works on Agriculture come out. From these informal, as well as regular meetings, and other advantages, too numerous in fact to mention, the several interests of our farmers would be promoted to a degree of which very few of them can at first have any conception. For it is plain that in proportion as an interchange of opinion between two men is mutually beneficial, so is an interchange of opinion advantageous to any number of individuals, and by means of a Society of farmers there will be established a circle of intelligence valuable to every one in proportion to its extent.

Incidental to, and as a consequence of an Agricultural Society is the annual Fair, some of the advantages of which we will consider in another article.—*N. Carolinian.*

AGRICULTURAL FAIRS.

One of the best arguments in favor of Agricultural Fairs, is, that communities which have once enjoyed them, never consent to allow their discontinuance. We assure the people of this and the surrounding counties, that if they ever succeed in establishing an Agricultural Society on a lasting basis, they, as others have done will find it one of the greatest auxiliaries to their farming and mechanical interests that could be devised, and as such feel it impossible to get along without it.

The importance of a step like this to the farmers and mechanics of this section of North Carolina, cannot be comprehended in a single thought, nor is it possible to enumerate the many advantages to be derived from an Agricultural Fair, in a newspaper article.

We have sought to bring the subject to the notice of our farmers, in the consideration of which they are better able to discover the wants of their branch of industry, than we are to point them out, nevertheless, we can see some of the wants of our county, and we deem it our duty to proclaim them.

Notwithstanding our great success as a strictly agricultural people, and no matter how profitable farming may have been and is in this favored section, it must be confessed that we are not up to the full measure of success that should have rewarded the labor and skill we have bestowed upon our lands, and had our efforts been more carefully, not to say more intelligently, directed, the face of the country would present a far different appearance, our lands evince a higher state of cultivation, and our farmers enjoy a far more prosperous and happy condition.

The production of strictly 'money' crops, to the exclusion of those which go to sustain life, and bring about that happiness, contentment and independence, common to sections with well-filled barns and smoke-houses, and thriving stock yards, adds neither to the real prosperity of the country, nor conduces to a healthy state of public or private morals. As men get money faster than their everyday and legitimate transactions require, they either hoard it or launch out on the dangerous sea of speculation, and avarice possesses their souls to the exclusion of their God, their country and the good of their fellow-man. Every other interest is swallowed up by this greedy infatuation for gain, every public duty is ignored, education is neglected, home comforts are sacrificed, and even family ties are severed, and every trace of the good and desirable is lost in the character of those who make themselves the slaves of a vice, which ever has wrought, and ever will work destruction to those who worship at its unholy shrine.

When God Almighty gave the earth to man to till, he commanded

him to observe the duties of a husbandman, in the strictest sense of the word, and those nations which have followed the injunction, have been prosperous and happy, while the reverse is true of those who failing to till the earth, have found bread otherwise than "in the sweat of their brow."

The Southern people have been strictly an agricultural people, in which they would seem to have followed the commands of Jehovah, but their efforts of late years have been mainly to draw from the bosom of the earth those products which supply food for speculators, leaving it to other sections to furnish that which sustains life. And verily we have our reward. Our liberties as a people are gone, "the rough ploughshare of war has passed over the graves of the past, tearing down our monuments of public honor and private affection," our every interest, nay, our very existence, depends upon the caprices of our enemies, who are our masters, only because we would not be masters ourselves.

To promote a system of Agriculture which shall overthrow and displace these taskmasters, the press of the South has with an unanimity as refreshing as it is complimentary to their recognition of duty, labored incessantly since the close of the war, nor will it cease its efforts in this direction until our section shall have been placed in a position of independence to the world. Therefore in reminding our people of their duty, and suggesting the way out of our present condition of slavery, we are but performing our part of that work which every Southern press seems to have regarded as specially assigned to it.

To bring our labors to a successful issue, we have had to combat old prejudices and counteract preconceived opinions. In the exciting scenes of the war our people lost step in the march of events, and fell behind in the progress of the age. Improvements had been made in every branch of industry to which they were strangers, and when the war finally ended by overthrowing their institutions and destroying to a great extent every system with which they had been familiar, it was to them emphatically a new era; new lessons were to be learned and the experiment of "teaching old dogs new tricks" had to be practically tested.

In adapting themselves to a situation, which at first they could not comprehend, and to whose requirements it was not thought possible for them to ever conform, they gave evidence of that recuperative power which has astonished the world, and which if judicially applied would, by the aid of the ploughshare and mattock, bring them that independence, in peace, which the sword failed to accomplish for them in war.

While the good sense of the Southern people have recognized these facts, as their comprehensive minds

took in the situation, yet the depleted condition of their purses have led them to pursue a system of operations apparently the best devised and quickest to put money into their pockets, and though the South is to-day some millions stronger in cash, she is in no sense more independent than at the close of the war, and if either the crops or prices should fail the present year, she would be no better off financially, the next. It is therefore obvious that a system of farming so precarious will not do, and unless our farmers have the discretion and determination to change it, we may look for no real and continued prosperity at the South, while we yearly run the risk of actual famine, for in the natural course of events, the West, our store house of supplies, must at no distant day fail In its meat and bread crops. And then?

But no farmer singly and by his individual efforts can work this reform. Any number of farmers, recognizing these facts, and earnestly desiring a changed system, can accomplish little or nothing but by united effort. Hence the importance of well organized Agricultural Societies in every section of the country; and as the whole country is thus in need of these societies, how important we should begin the work here in Edgecombe?

Agricultural Societies are followed by Agricultural Fairs, which annual exhibitions tend more than anything else to elevate Agriculture, and promote its various interests. Here farmers meet on a common ground of generous rivalry, and by a comparison of products, and a discussion of their various modes of culture, each and every one is alike benefitted. This rivalry stimulates every one to the production of rare fruits, alike valuable and desirable; induces the planting and careful culture of a variety of crops, too many of which are otherwise neglected. These fairs attended as they are by a show of fine horses and other improved stock, cause every farmer to turn his attention to stock-raising, and the result is that in a few years the country is stocked with the finest animals of every description, horses, cows, hogs, sheep, &c., in ample abundance for show, and consumption. From a desire sure to be felt on the part of every farmer to excel in everything, grain of every description, of the best quality and abundant in quantity, is yearly produced, and thus by competition in legitimate husbandry we are at once the producers of our own meat and bread, growers of our own fruits, raising our own stock, and supplying our own seeds from native growth. This, too, without interfering with the production of the cash staple, cotton. We have only varied our production so far as to make the production of that staple really profitable.

Agricultural Fairs encourage every branch of industry. Here farmers have an opportunity of inspecting and testing every improve-

ment in machinery, and every kind of farming implement that is being invented or improved from year to year. They develop the inventive and mechanical genius of the country. They call to the aid of the farmer science, the twin sister of Agriculture, and teach us lessons in rural economy, without which many of our best efforts are merely an unprofitable routine. They encourage our housewives in the work of producing and preparing for exhibition those articles of household economy, which are in such demand at the South, without which home is robbed of its comforts, and in the preparation of which too few of our wives and daughters are skilled, or even have any knowledge. These Fairs by bringing the people together annually to exhibit the fruits of their industry, and render an account of the "talents" given into their keeping, beget a better community of feeling. Acquaintances are formed, which in themselves constitute a life-long pleasure, and who were hitherto strangers, become neighbors and friends.

Farmers of Edgecombe and counties surrounding shall we have an Agricultural Society?—*North Carolinian.*

THE Emperor of Russia gets $25,000 salary a day; the Sultan, $18,000; Napoleon, $14,210; the Emperor of Austria, $10,060; the King of Prussia, $8,210; Victor Emanuel, $6,340; Victoria, $6,270; Leopold of Belgium, $1,648; and President Grant, $68.50.

HORTICULTURAL DEPARTMENT.

Rev. J. B. CHESHIRE, D. D., - - Editor.

HINTS FOR BEGINNERS IN GARDENING.

PREPARATION OF SOIL.

In preparing the garden for planting, the beds should be well spaded up in the early spring, at least ten inches deep. A dry time as possible should be chosen for this operation, that the ground may be loose and friable. After laying in this state for a few weeks, the earth will become warm and mellow; and then just before planting, it should be chopped over with a hoe or broken up with a pronged spade, and then well raked fine and level for the reception of the seed.

MANURES

should be adapted carefully to the nature of the soils they are intended to enrich. If the soil is sandy and hot then cold manures, such as that from cow and hog pens, with leached ashes, will be found most suitable. If stable manure is used for such sandy soil, it should not be applied until after having lain a long time in the weather to be entirely decomposed.—On heavy, loamy soils, or when it is a strong clay, fresh stable manure and ashes and guano, and any kind of strong manure will be found most effective.

As a general rule, stable manure will be found suitable for all garden purposes, when properly treated. It would be well in cleaning out the stables during the winter, to carry the manure in the garden, and compost it with the soil of the beds in piles, so as to have it ready for scattering in the spring, before spading up the ground.

MANURE HEAP.

Every garden should have in it a corner or spare spot, where refuse of all kind may be thrown to make a manure heap. As sweepings and refuse vegetable matter accumulate, throw on them the slops and soap suds, and all waste water from the house and occasionally scatter over the heap ashes or plaster, and this heap mixed with earth will be found in the spring, to be the very best garden fertilizer.

TIME OF SOWING SEED.

The proper time for sowing varies, not only with the various kind of seed, but often also with the same kind, according to the period at which the crop is expected to mature, or the use for which it may be wanted.—Vegetables intended for spring or summer use, if hardy, should be sown in the fall or at the very earliest opening of spring. If tender, the seed should be sown and the plants prepared in hot beds, and be set out at the time of the principal corn planting or a little earlier, if the object is deemed worthy of the risk. Unless the soil and location of your garden are very favorable do not plant or sow your full crops, even if early vegetables, until the ground becomes warm and free; let a few run suffice for extra early experiments.

For all tender vegetables, the planting time of the main corn crop constitutes a fixed point at which, in all latitudes, it will be found safe to sow and set out plants. The time of leisure between planting and first hoeing, is *the good time* for farmers to attend to the garden, the ground being plowed or dug a month or so before.

All crops of vegetables for winter use, should be sown late enough to avoid the summer heat upon the half-matured crop; those intended for cattle feeding, as early as possble, consistently with this indespensable rule; while those for the table use should be deferred to as late a period as may in any way consist with the probability of their maturing before winter.

Through the cool weather of autumn, all vegetables that have not been checked in consequence of too early sowing or by some other cause, if properly cultivated, grow with great rapidity and furnish products very superior in quality to those raised even from the same stock, but sown before the proper time. The judicious gardner, will, therefore, so time the sowing of his early and his late crops, that each may avail themselves of the advantages of the season peculiar to them—the early ones, of the first vigor of the spring warmth; and the late ones, of the fall weather with its cool nights and heavy dews, giving an impetus to their strong, second stage of growth. In well cultivated gardens, it will be found safe to allow about twelve weeks, for the growth of fall-sown vegetables.

DEPTH OF SOWING.

It is sometimes imagined that seed of deep-rooted plants, as radishes and beets, should be sown st the depth of the expected length of the root, and some *wise persons* have dug a deep hole and planted such seed at the bottom, expecting to raise a proportionally high vegetable, when, in fact, they have planted the seed beyond the power of germination or the hope of resurrection.

As a general rule, with few exceptions, shallow sowing is better than

deep. In dry hot summer weather, seed should always be sown in freshly dug, and then sown deeper than they would be in the spring or fall. The depth at which seed should be sown, may generally be inferred from their size. If seed are very small, they should be sown on the surface, previously well pulverized, and then carefully raked in. Seed thus sown, should have a gentle watering for three or four evenings after sowing if the weather proves dry, with an ordinary rose watering pot. Seed like the radish may be sown in drills from half to an inch deep, or upon a rough surface and then thoroughly raked in. Large seed as beans and beets, etc., may be covered from one to two inches deep, two inches being deep enough for the largest seed.

ASPARAGUS.

Sow the seed in the fall or early spring, thinly in shallow drills twelve inches apart. Keep the growing plants well worked. Transplant in permanent beds when one year old, have the beds very rich and very deep. Set plants in it one foot apart each way. Transplant in March.—One year from time of planting they may be moderately cut for eating.—Top dress the bed every fall with well rotted manure, and dig the surface over lightly every spring, sprinkling old pickle or refuse salt over the bed. Then to have it very white and tender, cover the whole bed six inches deep with sand, and cut the plants to the bottom of the sand, when it appears above the surface an inch or two.

BEANS—WINDSOR.

Drop the seed about three inches distance, in drills two inches deep and ten feet apart. Hoe often, draining the earth to them each time a little, until they are in full bloom. Nip the end of each stem an inch or two. Sow in the early spring—about the middle of this month.

POLE BEANS.

Plant in hills from two to four feet apart, have a pole set firmly in the hill, and then plant four or five beans an inch deep round each pole, from four to six inches from the pole.

CELERY.

Sow seed this month in very light rich soil and rake them in lightly.—Keep them watered and shaded when up. When the plants are three or four inches high, prepare trenches two to four feet apart, a foot wide, and a foot deep; dig into the bottom plenty of rotten manure, and set the plants six to eight inches apart, a single row in each trench. Shade them until they begin to grow, and earth them up as they grow. This plant may be also raised just as well, by planting the seed in drills upon the surface of rich soil, and after they are well up, thin them out to eight inches apart. Let the rows be five feet apart, and plant corn for roasting ears between the rows. This will shade them until they are well grown. Hill the celery up as it is needed, and though it is a little more trouble to raise a higher hill around them when planted on the surface, it makes as good celery as when planted in trenches.

CUCUMBERS.

Plant the last of this month in rich warm soil, in hills four to six feet apart, six seed in a hill one inch deep. When well up thin out to three plants. Hoe often till the vines touch.

MUSTARD.

Sow white mustard thickly in shallow drills a foot apart, from time to time through the season.

SPINACH.

Sow in shallow drills twelve inches apart. Cover lightly, and water in dry weather. If it is planted in the fall, it should have straw or evergreen brush spread on it to protect it from the cold winter.

SQUASHES.

Plant the last of this month in warm rich soil, in hills four to six feet apart, three plants in a hill. Hoe often and gradually hill up until the blossoms open.

AMENDE.

The articles in the February number of the FARMER were copied from pages 312, 313 and 314, of that excellent monthly the HORTICULTURIST, of New York, and due credit omitted not by design. We often extract from the HORTICULTURIST, because we find the articles always ably and carefully prepared.

USEFUL RECIPES.

FOR FOUNDER IN HORSES,

Clean out the affected foot or feet, fill full of spirits turpentine, touch fire and burn them out. The horse will be well in a few moments.

FOR COUGH IN HORSES.

Clean out, and pare the frog of the fore foot—hold the foot up and fill with spirits turpentine—hold it up till it soaks in, then take the other up and do likewise. I have cured them, with this treatment, of the worst form of a cough I ever saw a horse have, and never knew it to fail, but in one instance, and I presume, the cause of it was, that the foot was so hard and irony, that the turpentine would not soak in. I held up the foot as long as the horse could stand on one foot, and it did not seem to penetrate in the least. I tried it frequently, with the same result.

CURE FOR HOG CHOLERA.

Feed your hogs on the ground with shelled corn, and while they are eating, sprinkle them plentifully with fresh slaked lime in a fine dry powder, until their hair is full of the lime. Whether it is what they eat with the corn or what they inhale, I am unable to say—probably both ; but it has never failed to arrest the disease when tried. It should be done once a day until the disease disappears.

HOW TO CURE WARTS ON HORSES, MULES OR COWS.

Dissolve ½ lb. of alum in a quart of water; with a brush or cloth wet the warts twice each day for 10 days—they will disappear. I saw this recipe in some of the agricultural works as a cure for warts on cows' teats. I tried it on a young horse, whose nose was entirely covered with them.—They were very troublesome and tender, often bleeding. Four applications entirely cured or rather took them off.

GRAVELLED HORSE.

Give two-thirds of a table spoonful of saltpetre in a little salt, for three consecutive days; or take a pint of water melon seed, and boil in two quarts of water, till reduced to nearly one-half, and drench two mornings in succession; your horse will be cured.

FOR SWEENY,

take half an ounce Pulverized Can-

tharides (Spanish Flies,) put into half a pint Sweet Oil, shake well and apply well twice a day. It need not interfere with the work of the animal.

FOR BOTS,

drench the animal with half a pint of thin tar, which, I am told, kills them instantly.

BOTS.

One-half pint whisky, one-half pint of gun powder, one-half pint of molasses, and one-half pint soft soap, will cure the worst case of bots.—Another cure is, "a strong tea made of Mullein."

WARTS ON FOWLS.

Make a strong solution of saleratus or soda water, (the latter is preferable); take a soft piece of cloth or feathers and bathe the warts twice a day, (after first scarifying them); in a few days the warts will entirely disappear.

LICE ON CHICKENS.

Sprigs of cedar, scattered about the fowl house, will relieve them of this awful pest. Tar in the chicken trough is a preventive of disease.—*All the above from the Southern Cultivator.*

FOR A BRUISE OR BLOW.

Apply hot water a long time with wet cloths. Beef brine is an excellent lotion for both sprains and bruises.—A veteran among horses, claims, that it will almost set a joint or heal a fracture. Worm-wood or tansy lotions are also good.—*Allen's Domestic Animals.*

WATER-PROOF CLOTH.

To make water-proof cloth take two pounds and four ounces of alum, and dissolve it in ten gallons of water; in like manner dissolve the same quantity of sugar of lead in a similar quantity of water, and mix the two together. The cloth is immersed for one hour in the solution, and stirred occasionally, when it is taken out, dried in the shade, washed in clean water and dried again. This preparation enables the cloth to repel water like the feathers of a duck's back, and yet allows the perspiration to pass somewhat freely through it, which is not the case with gutta-percha or India-rubber cloth.—*Journal of Chemistry.*

GREASE YOUR WHEELS.

"Some persons may not be aware," says Hicover in his work on Bipeds and Quadrupeds, "that trifling neglect of a pair of wheels being comparatively dry or well greased, will cause twenty miles to take far more work out of a horse than forty miles would in the latter case; yet wheels absolutely screaming from dryness, are often seen and heard attached to carts and wagons; and thus would the brute in human form, let them scream till he had finished his journey's end, or his day's work, though his horses were drawing from such cause, at least one ton in four of resistance more than they would if the defect were attended to."

NEW COTTON.

The Texas *Plow Boy*, of the 11th ult., says: Mr. I. K. Lamb, of our county, Caldwell, has shown us a sample of a new species of cotton, originated by him, which is equal to silk for fineness and softness. Its color is slightly pink, somewhat variable according to the position in which the rays of light are reflected from it. Mr. L informs us that he only raised the present year, about fifteen pounds, which will afford him seed enough for an acre the coming season.

THE FARMER'S FRIEND.

THORN'S COTTON PLANTER.

THIS PLANTER was invented in April last by T. T. & G. T. THORNE of Edgecombe. It has given entire satisfaction to those who have used it, and will plant from a peck to six bushels per acre, by a simple and easy regulation of the wheel.

It opens the furrow, drops and covers the seed at the same time, to any required depth, and the seed require no preparation after leaving the gin. It is perfectly free and regular in its distribution, and never clogs. Runs very light, follows the ridge, and is easily handled, requiring little or no exertion from the horse or the holder.

We hope the planters of Edgecombe and adjoining counties will give our machine a trial. It will be manufactured at home, under our own supervision, of the best workmanship and material.

SAMPLE MACHINES

Will soon be on exhibition at Wilson, Rocky Mount, Greenville, Battleboro, Enfield and other places. A sample is now on exhibition at the store of Messrs. PENDER & JENKINS, Tarboro, who will take pleasure in showing the machine, and explaining its operations.

Persons desiring to test this Cotton Planter, can see it in operation on our farm at any time, where we have prepared ground expressly to exhibit it, or we will take the Planter to the farm of any one not too remote from us.

CERTIFICATE.

The following well known planters of Edgecombe planted their crops of last year with the "Farmer's Friend," obtained the best stand they ever had, and found their crop easier of cultivation from being so regularly planted.

EDGECOMBE COUNTY.

We, the undersigned, have used the "FARMERS' FRIEND," and find it superior to any we ever saw—giving entire satisfaction.

J. M. MAYO,
J. C. KNIGHT,
C. F. PITTMAN,
A. JONES.

PRICE, $20.

Planters of Edgecombe and adjoining counties wishing this machine, will apply to B. PENDER, Tarboro, N. C., or

T. T. & G. T. THORNE,
Whitaker's, N. C.

No.9-tf

NAVASSA

AMMONIATED SOLUBLE

PHOSPHATE,

MANUFACTURED BY THE

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WILMINGTON, N. C.,

IN BAGS OR BARRELS.

This Fertilizer is prepared with the utmost care, and contains every constituent desirable for any crop to which it may be applied. It is especially adapted to the growth of

COTTON, CORN, CEREALS,

AND ALL KINDS OF

FRUITS AND VEGETABLES.

It is manufactured of the same materials from which the celebrated

PATAPSCO GUANO CO.'S PHOSPHATE

is prepared, and reference is made to that Company (65 South street, Baltimore), for its efficiency, quality and uniformity.

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DONALD MACRAE,
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Wilmington, N. C.
MARCUS J. BATTLE, Agent,
Whitaker's P. O., N. C.

fe 1—3m

EDGECOMBE FOUNDRY

AND

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We manufacture Carts and Wagons to order, and every kind of Agricultural Implement suited to the cultivation of Eastern and Middle Carolina.

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We are agents for the Union Washing Machines, Allen's Lawn Mower, and Wood's Reaping and Mowing Machines.

We have also a large lot of Seed Potatoes: Early Rose, Early Goodrich, and Michigan White Sprouts.

We send seeds by mail. Liberal discount to the trade. fe 22—F&C 3m

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Mr. and Mrs. Owens' School,

TARBORO, N. C.

The FIRST SESSION of the year begins with January and ends with May; the SECOND SESSION begins with June and ends in December.

VACATION—AUGUST AND SEPTEMBER.
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The Spring Term of 1870 opens January 12th.

Circulars sent on application. ja1-3m FS&WC.

DR. J. A. FUQUA,

DENTIST.

will be in his office at Tarboro from the 1st until the 15th of every month, and in his office at Wilson the remainder of the time.

ja 15—tf

R. S. MYERS. T. H. B. MYERS.

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☞ Liberal advances made on produce to this address.
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McPHAIL'S WHARF, NORFOLK, VA.

THIS HOUSE DOES STRICTLY A

COMMISSION BUSINESS.

IT NEVER HAS NOR NEVER WILL DEPART FROM THIS PRINCIPLE.

From the fact that Norfolk is now in steam communication with Liverpool, and from the high prices obtained for produce in its markets during the past two years is sufficient evidence, we think, to satisfy the producer as to where his interest lies. It is a duty we owe ourselves to build up our Southern seaports; but it can never be done so long as the farmer continues to ship his cotton to the North. No. 1-1

JOS. W. JENKINS. R. H. PENDER,
Late Tarboro, N. C.

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We have secured the services of Mr. C. C. LANIER, of Tarboro, who will represent us in the Eastern counties of Carolina.

Reliable and responsible farmers will be aided by advances of fertilizers and farm supplies generally, at lowest market prices.

We attend to the purchase and shipment of any article wanted by our friends in the country.

Our agent, Mr Lanier, may be addressed or applied to in person at Tarboro.

ja 1—1yF&WC

Shell Lime.

We are prepared to furnish to North Carolina farmers on any of the rivers cargoes of not less than

1,000 BUSHELS SHELL LIME!

Price at kilns, 6 cents per bushel, slacked 10 cents unslacked.

BOWEN & MERCER'S

SUPER - PHOSPHATE,

Equal to any in the market.

PRICE $52 PER TON.

REFINED POUDRETTE!

GROUND BONES,

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The Grafton Mineral Paint Co. are now manufacturing the Best, Cheapest and most Durable Paint in use; two coats well put on, mixed with pure Linseed Oil will last 10 or 15 years; it is of a light brown or beautiful chocolate color, and can be changed to green, lead, stone, drab, olive or cream, to suit the taste of the consumer. It is valuable for Houses, Barns, Fences, Carriage and Car Makers, Pails and Woodenware, Agricultural Implements, Canal Boats, Vessels and Ships' Bottoms, Canvas, Metal and Shingle Roofs (it being Fire and Water Proof,) Floor Oil Cloths (one Manufacturer having used 5,000 bbls. the past year,) and as a paint for any purpose, is unsurpassed for body, durability, elasticity and adhesiveness. Price $6 per bbl. of 300 lbs., which will supply a farmer for years to come. Warranted in all cases as above. Send for a circular which gives full particulars. None genuine unless branded in a trade mark, Grafton Mineral Paint. Persons can order the Paint and remit the money on receipt of the goods. Address

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☞ Strict personal attention will be given to the receiving and shipping of all kinds of produce. No.1-1y

SPRING, 1870.

FOR COTTON AND TOBACCO

ONE TON OF WHANN'S, COSTING $60, increases the crop as much as one laborer. This is the experience of all the Georgia planters for several years past.

It hastens the crop to maturity two or three weeks earlier.

It improves the land permanently.

It has been extensively used for Cotton and Tobacco.

WHANN'S RAW-BONE SUPER-PHOSPHATE,

A STANDARD FERTILIZER,

KNOWN AND USED ALL THROUGH THE MIDDLE AND SOUTHERN STATES.

PETERSBURG, VA., February, 1870.

We have been selling WHANN'S RAW BONE SUPER-PHOSPHATE OF LIME, for five years past, and it has in every instance that we have heard of, given entire satisfaction. We annex the certificates of parties who have purchased it exclusively for four years, and they testify that it has produced fine crops, and improved their land greatly. We feel convinced that from its use farmers will derive as much profit in the product of a crop, and in permanent improvement to their land, as they can from any article they can use, and at a very moderate cost.

It has been extensively used in this State and North Carolina, and we are prepared to give the best reference in almost every neighborhood. We call your attention to a few certificates, and invite you to call on us before purchasing.

ROWLETT, TANNOR & CO.

AUGUSTA, GA., Feb. 5, 1870.

Messrs. Rowlett, Tannor & Co., Petersburg, Va.:

Gentlemen—Your favor of the 29th ult., to hand. In reply to your inquiries concerning Whann's Raw Bone Super-Phosphate of Lime, we would say that we have no hesitation in recommending it as a fertilizer for all crops. We believe that it is superior to many, and excelled by none.

It was used extensively on cotton throughout this State last season, and gave universal satisfaction. From all who have used it we receive most flattering testimonials as to its value as a fertilizer.

A very material advantage which it possesses is in causing cotton to mature early, before frost sets in. This, in a northern latitude—such as North Carolina and Virginia, where the seasons are necessarily short—is of self-evident importance to every planter.

We ordered 1,800 tons from Walton, Whann & Co. this season, the greater part of which has been sold already, and we doubt not but we will be able to sell considerably more than this before it closes.

In conclusion, we again assure you that we have no hesitation, whatever, in recommending it as a fertilizer for cotton, feeling confident it will prove itself as such to all who use it. We are, yours very truly,

CLANGHORN, HERRING & CO.

BRUNSWICK CO., VA.

Messrs. Rowlett, Tannor & Co.:

I used last spring, on my tobacco crop, about the same money value of Whann's Phosphate and Peruvian, and the land about the same. Up to cutting and harvesting the crop I could see no difference in the tobacco. In a small bottom, where there was more moisture than in other parts of the lot, where Whann's Phosphate was used, the tobacco was as good as the land could bring under the circumstances.

J. H. LEWIS.

PETERSBURG, VA., Sept. 17, 1869.

Messrs. Rowlett, Tannor & Co.:

Gentlemen—I used some of Whann's Raw Bone Super-Phosphate of Lime, last spring, on my present growing crop of tobacco, along side of Peruvian Guano, applied at the same time, on the same lot, and in equal quantities, and I can say, without hesitation, that to the very row where Whann's Raw Bone Super-Phosphate of Lime was applied, the tobacco is more than twice as large—having continued to grow and improve steadily during this protracted drought remaining green and vigorous all the time. It affords me pleasure to recommend this fertilizer to my friends. I shall use it largely hereafter.

W. P. ELAM.

GREENVILLE COUNTY, VA., July 23, 1868.

Messrs. Rowlett, Tannor & Co.:

Gentlemen—The ton of Whann's Raw Bone Super Phosphate of Lime I purchased of you last fall, I used 1,000 lbs. on wheat, with the same quantity of Peruvian Guano, side by side. I saw no difference. I used this spring 1,000 lbs. on cotton, with Peruvian 165 lbs. to the acre in the drill, and up to this time *my cotton is much better than where I used the Peruvian.* I have showed my cotton to my neighbors, and they have judged Whann's to be Peruvian. *I am so much pleased with it that I expect to use it altogether in the future. In fact, it is the best Fertilizer I ever used.* Very respectfully, &c.,

D. PRINCE.

COCKADE MARBLE WORKS,

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OL. 1. NO. 12. APRIL, 1870.

Prof Kear Geologist

THE RECONSTRUCTED FARMER

A

Monthly Magazine,

DEVOTED TO

THE FARM, THE GARDEN,

AND

THE HOUSEHOLD.

PUBLISHED AT TARBORO, N. C.

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THE
RECONSTRUCTED FARMER;
DEVOTED TO
THE FARM, THE GARDEN, AND THE HOUSEHOLD.

JAMES R. THIGPEN, }
JOHN S. DANCY, } - - - - - - - EDITORS AND PROPRIETORS.

For the "Howard Amendment" Agricultural Amendment.
For the Sword and Bayonet, the Plow-Share and Mattock.

VOL. 1.] TARBORO, N. C., APRIL, 1870. [No. 12.

VALUE OF SCIENCE TO THE FARMER--AN ADDRESS DELIVERED BEFORE THE ABBEVILLE AGRICULTURAL SOCIETY, BY DANIEL LEE, M. D.

Those who would impart fruitfulness to poor land in the cheapest way, must not only utilize solar heat every month in the year, all rain, dew and other atmospheric advantages, but those mild and severe drouths that raise fertilizing salts from the subsoil, and the rocks and earth below to the surface of the ground by capillary attraction. This source of fertility is not sufficiently studied. In some climates, as on the arid and strongly alkaline plains east of the Rocky Mountains, a large excess of bitter salts accumulates. More rain would remove this excess of potash, soda and magnesia, and carry these alkaline salts to the ocean. In our climate so much rain falls as to wash off any soluble salts from the surface of our fields, if not fixed in some living plant. Hence the importance of covering our fields with active vegetation at all seasons of the year.—Naked old fields not only wash into gullies very easily, but the bare earth is still more impoverished by the removal of all the agricultural salts that rise to the surface of the ground, either by capillary attraction or hydrostatic pressure. A thick turf of grass and clover, with some plants growing in summer like Bermuda and crab-grass, and others growing in the fall, winter and early spring like clover, blue-grass, orchard-grass, herds-grass, oat-grass, rye-grass and Timothy, operates to prevent all washing, and steadily accumulates plant-food for making, in the future, large crops of cotton, corn and wheat, with no outlay in hauling and spreading stable or cow-pen manure, and no expense in the purchase of commercial fertilizers. The manure known to be present in such a turf, has been estimated by good farmers as equal to ninety loads of good stable manure spread and plowed in on an acre. As the agricultural salts that spring water or any other brings to the roots of growing plants costs nothing, and as these plants, especially clover and the nutritious grasses, make valuable farm stock as well as rich valuable mould, I submit that this is a plain, common sense systen of mixed hus-

bandry for obtaining a fair income from land with small capital and labor. Where the land is too poor to produce grass and clover without help, some concentrated commercial manure should be purchased and applied. I recognize fully the great value of true agricultural salts, and I am anxious that you, myself and all other Southern farmers avail ourselves of those climatic advantages clearly within our reach, to command a full supply of the most concentrated manure, and at the least possible expense. In the aggregate, our wants are large, for we have a great deal of land in a fine, healthy climate that is poor in its natural state, and not a little that has been more or less impoverished by man.

In studying this subject, I have observed with lively interest the remarkable and enduring fruitfulness of river and creek bottoms, and especially the deltas of all large streams like the Nile, where high winds and tides mingle occasionally compound sea-salts with fluviatile deposits. The sea being the grand reservoir of the earth's most fertilizing salts, and its water cheaply evaporated, as at Turk's Island and the salt lakes in Southern Florida, and possibly in some places on your own coasts, I feel confident that this source of supply, properly developed, will be worth indefinite millions to Southern agriculture. I know from personal observation that lime and its salts make rich land in Tennessee, Kentucky, Ohio and Western New York. These calcareous rocks, like South Carolina shell-marl, are all formed in the ocean.—Sea-water abounds not only in land plaster and other salts of lime, but in salts of magnesia and soda, with more than traces of potash. It has not enough phosphoric acid, but the fossil bones or coprolities of the Charleston basin will, fortunately, remedy this defect.

The value of lime as a fertilizer (with other salts) is shown by the facility with which the nitrate of lime is formed in all lime stone caves in Northern Alabama, Tennessee, Kentucky and Western Virginia, from which large quantities of saltpetre were made for gunpowder during the late struggle for Southern independence. Knowing that saltpetre has the same force to make wheat, corn and cotton grow to feed and clothe mankind that it has to drive lead and iron balls through the air to kill the human race, I bought a farm on the Tennessee river on which they were then making saltpetre from a lime salt. (Nitrate of lime.)

Time will not permit me to go into the matter of *nitrification* as a fertilizing process, whether in a lime cave, in the soil, or elsewhere. The essential facts are these: When nitrogen is liberated from any vegetable or animal substance, if no lime or other alkaline element be present, it combines chemically with hydrogen to form *ammonia*, which is a well known alkali. But if lime, potash or soda be present, nitrogen forms no ammonia or other alkaline substance, but unites with oxygen to form a strong acid, (*aquafortis* or nitric acid.) This at once combines with lime, as found in our saltpetre caves.

Lime also enriches calcareous soils by promoting the formation of both phosphoric and sulphuric acids out of their respective elements. Iron ores

and iron soils, often have sulphur or phosphorus combined with the metal, in which condition they are as worthless as plant-food. If broken fine and heated with lime, the metal yields sulphur or phosphorus to oxygen, and the sulphate or phosphate of lime results. Lime land in Tennessee and Kentucky are excellent for wheat, blue-grass and clover, for the reason stated, and among others because lime developes in the soil assimilable nitrogen as well as phosphorus and sulphur—the three most expensive elements of all crops.

A word or two in explanation, how larger hickory walnut and poplar trees grow on lime stone hills, mountains and plains than elsewhere. The ashes of these trees abound in *potash* and contain some *magnesia*. How does *clay*, that is no richer in potash on calcareous land than elsewhere, give to forest trees two or three times more of this valuable alkali than they obtain from similar clay with nearly all lime left out of it? When the chemist will extract potash from its insoluble silicate in clay, felspar or mica, the mineral is made very fine and heated with quick-lime. This combines with the flint acid and liberates potash, so that a weak acid or water dissolves it. Hence, in England, roasting clay and turf with lime, or without it on calcareous soils, gives available potash for wheat and other crops. Marling, paring sods and burning them for manureal purposes, are practices as old as enlightened Roman agriculture. Having before us all the lights of geology, chemistry, vegetable and animal physiology, climatology, and two thousand years' experience in tillage and husbandry more than the Romans had, surely our practice of agriculture should be far better than theirs. If we will only act in concert, we can soon double and quadruple the value of our landed property, by making every acre far more productive. In union there is strength and wisdom. Isolation begets extreme weakness, conflict of action in all purchases and sales, poverty of land a dissatisfaction in the community. By combining their limited means, a thousand farmers may obtain from the ocean fertilizers at less than half, and probably less than a fourth of the sum they will cost in any other way. The richest earthly salts on all continents and islands naturally flow into the sea.—The supply is obviously inexhaustible there, while the great Atlantic is close at hand.—*Rural Carolinian.*

MORE ABOUT THE EVERGREEN GRASS.

Some months ago, I wrote you an article in which I gave the benefit of my experience and observation in the adaptation of "The Tame Grasses" to the soil of the Carolinas.

I wrote then with the view of encouraging the sowing of grasses, while it was yet time to do so, and I would have made another effort to arouse our people to the importance of the subject but was prevented, and now the time for spring sowing is at hand, and if you will give me the use of your pages, I will endeavor to show that evergreen grass suits our people best, and is particularly adapt- to our section.

In the article alluded to, I was able to give evidences of the experience of many of our best farmers who have successfully grown clover and orchard-

grass, while evergreen grass, which was in my judgment best suited to our section of any tame grass in use, was so little known here that, notwithstanding it had recommended itself to that section in Virginia east of the Blue Ridge, which in soil and climate so nearly resembles our own, I hesitated to do more than call attention to it.

Since then I have seen it growing luxuriantly in this State, and I am so well assured of the benefits which will flow from its extended introduction, in affording summer and winter pasturage and upland hay, in fields now covered with broom-sedge, that I feel constrained to give its main features condensed as much as possible.

I have long since discovered that so long as cotton commands twenty cents per pound, the cotton planter will turn a deaf ear to that man, be he Virginian or Kentuckian, who will attempt to prove that a rich lot, well set in clover, will, besides improving the lot, yield remunerative returns.—Hence, I say the grass known in Virginia as evergreen, best suits the planters of the Carolinas. Its features are briefly told. First, let me remark that there is no grass more easily removed from a field by the use of a two-horse plow.

It will grow on any land which will produce good oats. It continues green and growing nearly the whole winter in Virginia, hence its name, while in a warmer climate it will, I think, be a good pasture through the entire winter. It makes a strong tussock, thus holding the soil and resisting the effect of washing rains upon the soil. The sod when turned under greatly enriches the land. In good soil it will grow five feet high, but in our exhausted lands it will scarcely grow higher than oats. It unquestionably has greater tenacity of life during our severe drouths than any tame grass known, and though apparently seared and scorched by the rays of the sun, yet in the fall of the year, it re-assumes its green habiliments with which to supply food for stock in winter. If a field of it is kept for hay, two crops is the yield per annum. The hay, while not equal to Timothy, is but little inferior to it.

It should be sown on oat land well prepared by the plow and harrow, the seed to be sown at the rate of one bushel per acre on top of the soil and slightly brushed in. The field thus sowed should not be used as a pasture until the following year.

The advantages flowing from the use of evergreen grass are these: By sowing the lands in this grass, cattle and hogs can be supplied, without going to the corn crib, with provender of which they are exceedingly fond. Stock will be fat the year round. When the mules are unemployed, this grass will support them handsomely, and not salivate them as does clover. Land now washing away and soon to be thrown out, will be reclaimed and rendered a source of great profit. If these reasons are not sufficiently cogent, I must confess my inability to say anything, even if I possessed better powers of composition, showing why I urge the universal use of evergreen grass in the States of North and South Carolina. —*Valley Virginian.*

THE PREMIUM COTTON FIELD.

Mr. Editor: In obedience to a resolution of the Executive Committee of the State Agricultural and Mechanical Society, I herewith send you, for publication in the *Rural Carolinian*, the report and affidavit of Mr. J. M. Crawford, of Columbia, who was the successful competitor for the premium at our late Fair, for the greatest production of cotton, on both one and five acres.

Hoping that this report may stimulate others to go and do *better* the present year,

I am, sir, yours truly,

D. WYATT AIKEN,

Secretary S. C. A. & M. S.

REPORT.

To the Honorable Executive Committee of the State Agricultural and Mechanical Society:

GENTLEMEN: As I am a competitor for the prize to be awarded for the best five acres of cotton, I do herein certify that my five acres of land is an upland basin, surrounded by a gradually rising slope; that it was wet and comparatively unproductive when I bought it, and that I have by under-ground draining, manuring, and careful and judicious management brought it to a very high state of fertility and productiveness.

In making my drains I cut a ditch two feet wide by three and a half deep, and filled twelve inches with brickbats or stones, and threw in straw and cornstalks to keep the earth from falling in amongst them; I then filled up with earth. These drains I prefer to tiles, having tried both.

In November, 1868, after gathering my corn I broke up the ground with a half-shovel plow, six inches deep, and followed this with a two-horse plow, being a bull-tongue, fifteen inches long, widened near the point, the better to pulverize the soil. The lot remained in this condition until January, when it was harrowed with a large, two-horse iron-toothed harrow, which completely pulverized the soil, and left the ground clean and level.

On the first of April, I plowed and harrowed again, then laid off the rows four feet, and put the fertilizer in the drill, using a mixture of Peruvian Guano 200 pounds, plaster 300 pounds, and leached ashes 500 pounds, per acre.

I then threw up beds eight inches, and boarded off to four inches, and commenced planting on the 27th of April, using the Boyd's prolific seed, procured from Mr. Beckham, of Richland district, S. C. The seed were planted three feet apart by a compass in the hill, and covered with the hoe, the plowing to be done only one way.

The cotton came up well, and as soon as up, I sided closely, then hoed, then threw back the soil with a plow, and thinned out to one stalk in the hill. I next ran a half sweep close to the cotton, two furrows to the row, afterwards ran one furrow to the row with a sweep, breaking out the middles, and followed with the hoes to kill the grass. In August, another hoeing was given to "lay by" the crop, cotton then lapping in the rows. The thorough preparation of the land before planting prevented the necessity of much labor in cultivating the crop.

From these five (5) acres were picked and weighed 12,510 pounds.—

The manure cost as follows: Guano $44; plaster $14; ashes $4; stable manure $20; total $82.

In competing for the prize on the best one acre of cotton, I certify that the land is the same as the five acres, and cultivated the same way, the only difference being in the kind a manure used, and time of putting it on.

Eighty cart loads of stable manure, at a cost of twenty-five cents per load, were broad casted and plowed under in March. The land was thrown up in beds four feet apart, and the Boyd prolific seed planted in hills three feet apart, covered and cultivated as were the five acres. This single acre yielded a much larger crop than the average of the five acres, the harvest being 3,960 pounds of cotton, with a cost of $20 for manures.

Your obedient servant,

(Signed,) J. M. CRAWFORD.

South Carolina, Richland county.

Personally appeared before me, J. M. Crawford and L. R. McCormick, who made oath that the above statement is correct.

(Signed,) J. M. CRAWFORD,
L. R. MCCORMICK.

Sworn before me, this 10th day of December, 1869.

(Signed,) EDWARD HOPE,
Magistrate ex officio.

SUGAR AND SYRUP FROM CHINESE, IMPHEE AND TROPICAL CANES.

Editors Southern Cultivator: The absorbing and engrossing attention paid king cotton in the South, to the detriment of other industrial agricultural pursuits, has the effect not only to raise the commercial value of products of prime necessity, but also to carry out of the country vast sums of money which should be retained in our midst. One of the most important of these *side interests*, is the production of sugar and syrup, (*not molasses.*) To show the importance of this interest to the nation at large, I will give statistics from the Department of Agriculture, in relation to the amount consumed *per capita*, and the value in dollars and cents.

The census for 1860 gives the amount of sugar (cane) for 1859, and made in the United States, at 230,000,000 pounds—of maple sugar, in pounds, 40,120,083; total, 270,120,083 pounds. In the same year, (1860,) the amount imported reached 694,751,558 pounds —424,751,558 pounds more than was produced, showing the production in times of profound peace, did not average one-third of the amount consumed. Of the amount of sugar manufactured in the United States in 1859, (270,000,000,) 221,762,000 was produced in Louisiana, or 221,726 hhds. In 1864, this amount decreased to 6,755 hhds.; in 1865, the amount increased to 13,913 hhds.; 1866, about 40,000 hhds.; 1867, probably about 10 per cent. over 1866. The amount annually will probably largely increase. In 1866, the importations of foreign sugar amounted to nearly 1,000,000,000 pounds, an aggregate expenditure of over $50,000,000 per annum for foreign sugar, all of which should be retained at home. The consumption of sugar *per capita*, amounts to 26 pounds per annum, exclusive of 33,259,451 gallons of molasses produced in 1859. It will be seen by the above calculation, that it requires over 1,000,000,000 pounds more sugar to supply the demand than is produced in the country, and

100,000,000 gallons of refined syrup could be easily disposed of, at an average of $1.00 per gallon. According to this estimate, $200,000,000 could be annually made and saved to the country. 33⅓ per cent. would be clear profit, to be invested in cotton and other manufactures, in improving stock, agricultural implements, constructing commodious gin, barn and other out-houses, planting orchards and vineyards, and making ourselves *independent of foreigners.*

The difficulties that have heretofore attended the successful manufacture of sugar and refined syrup, from Chinese and Imphee canes, is the large amount of gummy albuminous and nitrogenous compounds they contain. Various devices have been introduced for defecation, and neutralizing the acids. So far as syrup is concerned, this has been accomplished, by filtering through animal charcoal, having previously brought it by evaporation to a specific gravity of 20 Baume, and afterwards rapidly evaporating at a temperature of 225 to 230 deg. Fahr. Milk of lime has generally been used for neutralizing the acids. It, however, leaves a dark color in the syrup, and a strong and unpleasant taste and odor.

Defecation.—This term is applied to the separation of green vegetable matter from juice, in (should be done before) the first stage of boiling.—The juice, after being deprived of all floating matters, contains a large portion of coloring matter, vegetable albumen and other substances in solution, inseparable from the fluid, until coagulated or taken out of solution. "Our means of affecting this object, are very imperfect. *An innocent and convenient defecating agent,* is the great want of the *cane interest.*" By the present mode of procedure, a portion of the crude matter contained in the juice is separated by heat, and comes off in the form of green frothy scum. As the juice becomes more dense and the temperature rises, other portions separate and come off. Later, the green appearance ceases, and a yellow or whitish substance appears, of a gummy character. It is believed that this substance would continue to appear on the surface of the syrup, so long as it remains exposed to the heat. Until some simple method is used that will free the juice of all soluble substances, we shall never have a first quality of superfine syrup that will stand the heat of summer without change, and give the largest per cent of chrystalized sugar.

The new discovery of Oxydizing Fluids, patented by R. d'Heureuse, Esq., in California, is the only known method of accomplishing this desirable result. By this process, no *reagents* are required. The use of animal charcoal is dispensed with. There is no possibility of fermentation setting in, and the defecated juice can be evaporated at the convenience of the operator. The mode of operation is adapted to the most common intellect. There should be two sheet iron tanks of any desired dimensions, adapted to the size of the crop—these tanks or pans to be set in a connecting furnace. The juice is conducted from the mill to one of these tanks, until three-fourths filled, or sooner. At this stage, fire is started under the tank. By the time the juice is heated to 100 deg. Fahr. it should be turned from the mill to the other tank. When

the juice in the first tank becomes heated to 135 deg. F., the fire is reduced (no fermentation can ensue above 135 deg.) so as not to allow the temperature of the fluid to rise above 150 deg. F. At this stage the air treatment is introduced. A flexible metal perforated pipe is laid on the bottom of the tank, extending up the side, and connected by a coupling to a rubber hose. The hose is attached to the nipple of a rotary force air pump. Air is injected through the fluid for about three hours—allowed to settle for one hour, it is then run through bag or other filters, into a reservoir. At this stage it is defecated and deodorized and ready for evaporation. In this way, the grinding and defecating can be carried on all night, and evaporated the following day. By this method and a due regard to scrupulous cleanliness, combined with the use of the best improved mills, evaporators, tanks, filters, pipes, moulds, &c., the product will be refined sugar and syrup (there will be no molasses) free from gum, dextrine, or any impurity that will exert a deteriorating influence on the product.

In a subsequent No., I will endeavor to give a description of the best motive power, crushing mills, evaporators and general apparatus, for large and small establishments; the systematic arrangements of the same; probable cost; preparation of soil, planting, cultivating, harvesting, &c.

A. C. Cook.

Covington, Ga., Dec. 28, 1869.

WHICH IS THE BEST BREED OF HOGS?

Editors Southern Cultivator: This question has been asked me so often, that I desire to give some reply through your popular journal; and as concisely as so comprehensive a subject will admit.

It may be safely said, that *no particular breed is best for all situations and circumstances.* Every farmer therefore must select for himself, that breed which has the traits and qualities which best adapt it to his peculiar purposes and advantages. The very extensive hog family has almost infinite varieties in it, which have been produced, somewhat spontaneously, by climate and diet, and also by the skill and care of man, in crossing and breeding them. The *depression or swaying of the spinal column*, or the elevation of it into an arch, is the feature which will most commonly distinguish the family, and designate the traits of the different varieties of it. The former generally have round bodies, short legs, wide shoulders, small bones, delicate skins, thin hair; they mature early, and fatten kindly to medium size, if well provided for. They are to a great extent artificial by the skill of man, and their defects must be supplied by the same skill and care which made them. The large predominance of muscle and fat over their bony structures, necessarily makes them indisposed to activity, and the food which they cannot seek for themselves must be supplied to them. Their skins and hair are delicate and thin, and the care of man must protect them from the causes of cutaneous diseases; and from the sun in summer, and the cold in winter.—Though they are of prolific character they will over-lay their young, on account of the indolence of their natures, if they are fat at the time of

parturition. The cavities of their bodies being small in proportion, they necessarily have when fatted an over-proportion of outside fat, and less leaf fat. The Chinese, Calcutta, Guinea, and Thin-Rhind are the oldest types of this class; while many others have been produced by crossing with them.

The class with elevated backs is in many respects the opposite of the last. The less improved animals of this class, have too much bone in proportion to the amount of muscle and fat, which gives them greater industry of habit, and activity of character. They can consume not only what may be supplied to them, but can also seek their food and water in larger fields and pastures; and even range the hills, bottoms, and woodlands, in quest of food supplied by nature.

Their skin is thicker and coarser, enabling them to resist injury and repel disease, especially such as is in duced by sleeping in dust, mud, raw or leaves. Their hair is thicker and longer, sometimes being woolly and bristly, thereby giving protection from sun or snow, in turn. The reat depth from the tops of their rched backs to the bottoms of their ellies, and the large natural cavities their bodies, gives them larger iddlings when fatted and killed, nd a larger proportion of leaf and her inside fat, and a smaller proortion of out side fat. *The native gs of Berkshire, Essex, Yorkshire, and ffolk, counties of England* were chiefly this class. Their general qualities ere good, and they afford the best sis for improvement, by the skill man. The English breeders, while they place a high estimate on the value of blood, know also the importance of a fresh infusion of it to give tone and vigor to the constitution; and they knew the greater value of crossing the different breeds through the male animals of each; thereby transfering the good qualities of one breed to the form and constitution of another, thus removing defects, and increasing excellences. The Berkshire hog of England was thus produced by breeding the larger, coarser and more active old native sows of that country, to the Neapolitan (Italian) boar; and so of the Essex.

The Middlesex was produced by crossing with the Chinese; and the Suffolk by the Chinese and Berkshire. *The Duke of Bedford* improved two families of hogs in this mode also, by crossing mainly with the Chinese boar; one of which families he called White Bedford after himself, and which retained the white color of their progenitor; and the other he called Woborn, after his castle, and which retained the color chiefly of their native female ancestry being dark gray, or dark and white spotted. Hogs of this last variety were presented by the Duke of Bedford to Gen. Washington. They were adapted to Virginia; multiplied and became common; were brought to Kentucky by the earliest setlers, and have been diffused over the vast West, and their form, color and character are even yet seen to predominate in the general stock of the West, thereby showing their better adaptation to all the requirements of the country; while many other varieties have, in turn, become fashionable, and then have disappeared. A fresh infusion of this

blood was afforded to Kentucky about thirty years since, by the importation to Kentucky by some Woburn hogs from Belmont county Pa., by Dr. S. D. Martin of Clarke county, Kentucky; and they were for many years the most common and popular and practical family and pork house hog in the State, and their blood yet shows its prevailing excellence in many stocks.

Let the American breeders do as did the English; and in each great section of the country produce a variety of hogs, which shall be specially adapted to it, in all of its requirements and circumstances. They have intelligence skill and science, and practical advantages not inferior to any other people; and the whole country should discard the old fogy idea, derived from our forefathers, that what is *native* is therefore inferior, and what is *imported* is of consequence superior.—Let us remember that the basis and secret of improvement, lies in the inherent procreative power of the male to transmit his qualities and attributes, be they good or bad, and that whatever quality or excellence we desire our stock to possess, may be derived by breeding to a male which possesses it in a high degree; and in whose constitution it is deeply and indelibly improved by propagation through many generations.—*Southern Cultivator.*

IMPROVED FARMING, &C.

Editors Southern Cultivator: Enclosed find two dollars for renewal of subscription to *Cultivator*. I would it were in every farmers' hands. It is strange that some will not patronize a journal advocating the interests of agriculture so profitably. Some denounce anything of a scientific nature as regards farming. There is yet doubt in the minds of many as to the reality of the various large yields reported, and the improved system adopted. The old modus operandi of farming, whereby the soil has been scratched and washed away into the Gulf of Mexico, is pursued by a class who will not experiment, who will not concentrate, preferring rather to spread over a large arena, and if possible to encompass every acre at once. The converts to the improved system, —and that through the instrumentality of the *Cultivator*, I am proud to say,—are many, and I believe many more are now on the repentant list. Just pelt old fogies as hard as you can—knock them first on this side, and then that, and all over, and I think the most of them will give up the ghost and unite their efforts and songs in behalf of science. What a great mistake it is to think book learning unnecessary in the pursuit of agriculture. Let the impoverished soil speak. Men will contend for surface breaking of the soil and deep cultivation afterwards, in the face of stubborn facts to the contrary. Nature must be assisted. We must know the wants of our soil—in what it is deficient, and how to supply this deficiency, before we can improve it. We must explode anti-bellum and ante-deluvian ideas—burn up ante deluvian plows, and procure labor saving and improved implements.—Shall we fold our arms and wait for God to improve the soil, without effort on our part. Let us awake from our lethargy and sleep, and quit singing and sighing about spilt milk

and the halcyon days. The past is gone never to return, and so are negroes as slaves, and nothing remains but our lands. I said nothing but our lands—that's a good deal, and they can by industry and proper treatment be made great fortunes to us. Let us start out with fresh vigor and determination. I insist on fewer acres, deep preparation, high fertilizing and shallow cultivation—I insist on the Dickson plan. My limited experience has sufficiently demonstrated to me that his is the proper method of cultivation. We must not say Dickson's plan is a failure, when the truth is *we* failed. One effort should not suffice us. Try again, to see who is right or who is wrong.—Let us experiment largely, as I am satisfied many farmers are ignorant as to what they can do. We need book farming, as Mr. Dickson has said. Preach up the doctrine of study of the soil, of concentration and of improved implements.

A word more and I close. I wish to say that the subject of immigration is one of great interest to the Southern people, and every one ought to speak out. I coincide with Mr. Dickson, and I think that a large majority, if put to the vote, would do the same. His argument is irrefutable, and those who take issue with him, are down with some sort of fever, I know not what. If it is not fever, it's awful blues.

A merry Christmas to you and a happy New Year. Long may the *Cultivator* flourish, and still further extend its circulation.

James A. Hall.

Greenville, Ga., Dec. 23, 1869.

AGRICULTURE.

Editors Southern Cultivator: Agriculture is a science which seldom, if ever has been mastered by a single mind. Jethro Tull became eminent in one department, as David Dickson has in another, and "every other man," who has a garden or a turnip patch, thinks he knows all about farming. But, what ninnies most of us are, agriculturally speaking. This man will scratch his land up and down hill, stimulate his crop with some active fertilizer, (?) and because he reaps a handsome per centage for this single experiment, concludes he has improved his land, not for a moment reflecting he has washed away more of nature's plant food than would pay twice over for his stimulant.

Another will impoverish a piece of good land by his five or six year rotation system, and because the grateful and patient soil continues to give of her abundance in successive crops, he thinks he is enriching himself and his land, never a single time comparing notes to see the relative net income (labor and seasons considered,) produced the first and seventh, or second and eighth year.

A third will sprinkle in his fire-fanged stable manure, or daub down his lumps of dirt, water and leaves, (called compost manure,) and should he perchance, "make a good crop," he concludes at once that manuring "is the thing," never noting the time of planting, mode of culture, or kind of seasons.

And all of us put guano here and manure yonder, regardless of soils, as if mother earth were not like ourselves sometimes—rather choice in

her diet. And so wags the agricultural world, blindly practicing that science which is the most important to plant as well as animal life.

Were practical men reading men, the planting world would be greatly benefitted, and in a short time agricultural ideas would be sufficiently prized to have a monied value put upon them. And why should it not be so? In every other science the proficient is paid well for his notions. To acquire legal lore demands close application, loss of time, and expenditure of money. The same with medicine, and indeed too with agricultural success. And yet how differently the results of these investments are appreciated! The lawyer, when he "hangs out his shingle," wants pay if you ask him what he thinks of the weather; and the doctor always charges you even if he kills you; the commission merchant too, after "learning the ropes" in the counting house, wants heavy commissions for benefiting you (and himself too) by sale of produce and filling orders. And, as for manure venders, phosphateites and guanoites, they are mercilessly heavy in charges though their school of preparatory training has been of very short duration. They of all men, are reaping rich harvests from the gullibility of the planters.

I don't know how it is with you, Mr. Editor, but I have my desk full of well executed pamphlets, each filled with short letters from planters detailing their experience with specific manures. Let's open and read.

First, there is that turnip patch man, above spoken of who says, "Coe's Phosphate made me better turnips than I ever made before." This, of course, induces leatherhead to buy this stimulant for his turnip crop.

The next pamphlet we read, "Mape's Super-phosphate has excelled genuine Peruvian guano on my cotton crop." Off goes Bullet to sink his last dime on the Mape's investment.

Another writes, "I have tried the Wando on every variety of crop and it paid me handsomely on all." A fourth says, "Baugh's Raw Bone is a gold mine to the cotton planter." That's what I am looking for says Novice, and in a few weeks the buzzards are hovering over his plantation.

And so they go through a dozen or more pamphlets filled with the experimental results of certain planters, not one in a dozen of whom ever made a dollar net money by his profession. Should not such men know, will they not believe, that these letters mis-lead and injure their fellow planters? A detailed scientific experiment (*vide* Dr. Pendleton's) should be a text book to young planters, but these phosphate epistles are certainly not to be relied upon. If they were paid for they would be valuable, because none but the most reliable would be published. They would be to the planter, what the lawyer's council is to his client, or the Dr.'s prescription to his patient.

But, I may be told the planters are in search of this kind of information. I reply, be easy; the vender will not hide his light under a bushel. He would cheerfully pay for experiments, if he did not get them gratuitously.—What advantage has this epistolary information been to the planter? I

respectfully submit, none in a national point of view, for if they have benefitted some by accidental purchases, others have lost money; else, why do we not hear of the South being enriched by the investment of millions in these commercial fertilizers? It is because where one planter makes, another loses by this indiscriminate and ignorant application of stimulants. Indeed the success has been the other way. No Phosphate company has ever failed, the the stock in many of them has doubled itself since the war.

Will not the readers of the *Cultivator* coincide with me in my views?

Respectfully, PANOLA.

Cokesbury, S. C.,

CORN AND COTTON VS. COTTON.

Editors Southern Cultivator: For some time past I have been thinking that I would write an article setting forth the profits accruing to the cotton planter who raises his own corn.

You may demonstrate to any close of men that if they pursue a certain course of conduct, the good of the country will be subserved thereby, still they will not pursue it, unless it conduces to their individual interest. You might address the cotton planters of these Southern States month after month, for the next fifty years, on the patriotism of planting more corn and less cotton, and not induce them for that reason, to raise an additional amount, sufficient to pay for the ink and paper consumed in the publication of your addresses. Their answer will ever be: "I cannot afford to sacrifice my individual interest for the little good it will do the country." If by concert of action you could secure a pledge from all, to plant one half their land in corn and the balance in cotton, doubtless much good would be accomplished. But I apprehend that it is next to impossible to bring about this concert of action. In the winter of 1866-'7, so many persons suffered throughout this section of country, (and doubtless other portions also,) that there was a general ventilation on this subject, and apparently a universal determination to plant enough land in the future, to insure a supply of corn. What was the result? I will give you an illustrative anecdote, in reply.

Italy, as you know, is a wine-growing country, and it is customary for every one there to drink wine. The people in a certain neighborhood agreed among themselves, that they would furnish the parish priest with his wine. For convenience, an empty barrel was placed at the door of the Cathedral, and every man was to bring his contribution with him the next Sabbath morning, and empty it in the barrel. One man, Mr. Sneak Thrifty, reasoned with himself after this wise: "I have no more wine than I want to consume or sell, and as all the others will carry wine, a little water will not be detected—so I'll fill my two bottles with water." He did so, carried them to the Cathedral, and inserting the necks of the bottles into the bung of the barrel, as did the others, emptied them, and went into the house. Now Sneak Thrifty felt as if he had played a very cute trick. After service the priest went to sample his wine, and to his astonishment, and that also of his congregation, discovered that the bar-

rel contained nothing but water.—All had reasoned as Sneak Thrifty. The result was, the priest, as their confessor condemned them to pay four barrels, by way of penance for their duplicity. Now for the application.

In the spring of 1867, all concurred in the opinion that it was the best policy to plant more land in corn and less in cotton, and nearly every one thought that corn would be plentiful in the fall. But before the time for planting arrived, most had decided that every one would plant largely of corn, and would of necessity plant less cotton; and there would, therefore, be a short cotton and a large corn crop. Corn, in consequence, would be cheap, and cotton high.—They "*pitched*" their crops accordingly. Thus it will ever be, Mr. Editor, unless you convince men that it is to their individual interest to raise provisions, whether others do so or not.

No one will deny that the produce of one or one hundred acres of land cultivated in cotton, will sell for more than the same number in corn. We will give the figures; but before doing so, let us settle a few preliminary points.

One bale of cotton to three acres of land, is a good crop for the plantation in this country—in fact it is above the average. Weighed as picked in the fields, it will require 1,800 lbs. of seed cotton to make one bale of lint. Any three acres of land that will yield one bale of cotton, will yield thirty-six bushels of corn—twelve bushels to the acre. Valueing corn at $1.50 per bushel, (a low average price,) and cotton at 20 cts. per pound net, the figures will stand thus:

3 acres of land, a bale, 500 lbs., 20 cts.....$100 00
3 acres of land in corn, 36 bus, $1.50.....$54 00
3 acres of land 350 lbs. fodder, $1.25..... 4 37—58 37

$41 63

Showing a difference of $41 37 in favor of the 3 acres cultivated in cotton.

Suppose we take these figures and apply them to practice. Every observing farmer knows, that for each additional acre of land planted in cotton, two must be deducted from the number in corn. In other words, if a farmer is able to cultivate 20 acres to the hand—10 in corn and 10 in cotton—he will not be able to cultivate more than 15 acres in cotton alone—13½ would be nearer correct.

20 hands, 15 acres each in cotton, 300 acres 1 bale of cotton to 3 acres, 100 bales, 20c..... $10,000 0
20 hands, 10 acres in cotton, 200 acres, 1 bale to 3 acres, 66⅔ bales, 20 cts.....$6,666 00
10 acres in corn, 200 acres, 12 bushels per acre, 2,400 bushels $1 50.....3,600 00
1000 lbs. fodder to 100 bushels corn, 24,000 lbs. $1.26 300 00–3,800 00

$10,566 0

When reduced to practice, you perceive that the planter makes a clear gain of $566,66, by producing his own corn. He has pasture for his mules and horses; he can raise corn peas on his corn land without any additional expense. The vines are valuable for stock, and good for manu

for his land; his 66⅔ bales, picked out in good time, and in better condition, will command a better average price than the 100 bales will. If he finishes his gathering before Christmas, he can turn his hands loose and save expense; or what is much better, he can make manure by hauling leaves and trash of every description into his horse lots, cow-pens and hog lots, and do a hundred other profitable things. Land is abundant and labor scarce. As I wish to make as much money as possible to the hand, I plant the same number of acres in corn that I do in cotton.

Respectfully, J. R. R.
Alabama.

EDUCATION OF THE AGRICULTURIST.

Daniel Webster said: "No man is so high as to be independent of the success of this great interest; no man is so low as not to be affected by its peosperity or doctrine, The cultivation of the earth is the most important labor of man. Man may be civilized, in some degree, without great progress in manufactures, and with little commerce with his distant neighbors, but without cultivation of the earth, he is, in all countries, a savage. Until he gives up the chase and fixes himself to some pace and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

A Massachusetts farmer says he can winter his cows on steamed feed for one-third less expense than on dry feed, and get one-fourth more milk. This is the result of five years' experience.

THE
Reconstructed Farmer.

JAMES R. THIGPEN, JOHN S. DANCY, } Editors and Proprietors.
WM. A. HEARNE, - - Managing Editor.

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TRIALS OF SOUTHERN AGRICULTURE AND THEIR REMEDY.

Long before the war of 1861, Southern planters knew that *thorough drainage, deep ploughing, heavy manuring and thorough cultivation* were the best means to make farming profitable in every country; and if these were but particularly practised among us. It was because abundance of fresh

lands and the finest alluvial lowlands in the world, had the same preventive influence here as it once had at the North and elsewhere.

Now, the Southern planter feels convinced that the practice of these leading operations are more necessary than ever, to make free labor pay in our agriculture. Practical men in different Southern States have shown that by the proper application, land may be made to produce two, three even four, bales cotton to the acre. Establishing the maxim *that the more labor and manure properly applied on land the more profit it will pay.*

The question arises—why do not all Southern planters do likewise? It is not from want of connection they do not, but because few are able to risk the expenditure. A favorable season might indeed lift them on the tide of fortune, but an adverse one would sink most of them to destruction, and they are too poor to run the risk of equal chances. They remember the year 1867—that year of sorrow to many. In 1866 cotton had ranged from 40 to 50 cents a pound; 1867 opened upon the South. Free labor had begun to assume some form, and planters spread themselves to test it. Never did men make greater efforts for their means. High wages; manure without stint; energy never surpassed marked the strides to ruin. No wonder they are afraid of repeating such disasters, afraid of expenditures, requiring leins on their very subsistence. Still without capital their main hope is that a good season may reward their humbler lalors, and enable them to procure their favorite vocation, fearless of consequences.

But even since 1865, *with a country short of grain, stock and forage*, we have persisted in making cotton *our only* market crop, with the hope that its high price would relieve our necessities. During this time the prices have averaged above twenty cents a pound, yet we have, to a great extent, the same encumbrances on our efforts. Is there no remedy *for this bondage for our very bread and meat?*

No doubt the maxim, "the more labor and manure properly applied to land, the more profit it will pay" is true, but *under our no bread and meat system*, what good will it do us?

Suppose by its use, we make every acre produce five bales, what end will it serve in our system, but to bring cotton down to its lowest cost of production, and still all its pounds must go abroad for articles of prime necessity, just as it does now.

If twenty and twenty-five cents a pound could not redeem us, what will become of us should large crops drop it below twelve or fifteen cents, or the crop prove a failure? Either extreme would prove disastrous no matter what the crop, or what the price, the whole proceed must leave the south for supplies, which are often consumed before the crop is made. Your advice for diversity of

crops, is the true remedy. And mine is *make your supplies if we make nothing else.*

Let our farmers reflect a moment. The present cotton crop is worth at least $200,000,000. The north retains most of this immense sum for the common necessaries of life. If we produce our own meat, bread and forage, we would save one-half of it, or $100,000,000.—This would soon give us factories which would save much of the other half. Then an accumulation of capital; then direct trade with the world, leaving but little to the north even for articles of taste and luxury—a consummation most devoutly to be wished for.

Reflect again, that the present crop is estimated at 3,000,000 of bales, and still brings twenty cents a pound, and another crop of 3,000,000 or more must drop it much lower. But there is every reason to suppose that a crop of 2,000,000 or 2,500,000 bales would still keep it up from twenty to twenty-five cents. In short, that it would bring as much or more money than a much larger one—leaving nearly half our labor free to produce food and forage crops, and thereby save nearly $100,000,000.

If the south put forth but half her energies for food crops, she can flood the markets of the world, she can then depend on herself, and no one else, then the north and northwest may reap the reward of low prices and high taxes of their own making, which they so well merit.

It is, perhaps, true that the south has gained some fixed capital since 1867, but the miserable radical policy in every southern State, makes such gain so precarious that one bad crop, a fall of prices, or financial crash, might make it vanish like smoke under our no bread and meat system.

The moral of all this is, that one-half of our labor in cotton will produce as much money as all, while the other half may save $100,000,000 as supplies. WATCHMAN.

WORK FOR APRIL.

During this month most of the corn is planted in this latitude, and as farmers commence planting their cotton about the 25th of April, the largest portion of fertilizers will be to apply to the lands.

Therefore there is a vast amount of labor to be performed in regulating rows, distributing compost, ridging up cotton land and planting.

Upon the energy and management of the planter this month, depends to a considerable extent his success.

CORN.

In planting corn, there are various opinions as to the distance the rows should be apart, and whether it is best to plant all one way, that is in drills or in squares, what is called by some in checks. Either way will answer if well planted and cultivated, there is no doubt; while neither will do so well if improperly planted.

We plant both ways, but principally in drills. The usual width of rows is from five and a half feet to six feet wide. The distance the corn is al-

lowed to stand apart in the rows depends upon the capacity of the soil.—Where the land will bear most, we have the most plants, and where the soil is poorest fewer plants per acre.

In running the rows to plant, we have them run deep, in order to put our corn down well in the ground, and if the land is rough and full of trash, as is often the case in new grounds, we have two or three furrows run in one row, and if we fail to plow the row sufficiently deep to put the seed below the turf, we dig holes with a hoe and plant as we would around a stump.

We cover the grain shallow. One advantage to be derived from putting seed down in the ground is, when we have frost, as is commonly the case, the young plant is not so easily injured or killed, as if planted in a shallow furrow, neither will it lodge or blow down so easily during the winds of summer. We hold that it is best to have the soil level, and not bed it up as is the custom in many sections in Eastern Carolina. We hold it to be best to plant level and cultivate in the same way.

We do not believe in manuring corn in the hill, but in the drill or broadcast. For if you put the manure in the hill, it will hurry the young plant off rapidly, but before fruiting time it will fail. We make it a custom to plant all or nearly all of our corn early in April, that it may be up by the time we finish planting cotton, in order that we may take all of our force in the corn and give it a thorough working with plow and hoe in a few days, and then it will be in a condition to wait until we put our cotton in good order; by this means, we never have both corn and cotton suffering for want of work at the same time.

COTTON.

In the last number of the *Reconstructed Farmer*, page 338, we gave gave our method of running rows, hauling and distributing compost, but if you have any imported fertilizers to apply in the drill, the proper way to do this is with the hand, if the weather is not so windy as to blow it away, but if windy, you can sow through a box made trumpet shape, large enough at one end to admit the hand and small at the other end.

You can have these made of tin at a small cost. This box is attached to the side of the sewer, the little end is dragged along the drill, where you wish the guano put. The quantity to be sowed is determined by the amount of guano you have to use, and the quantity of land you wish to apply it on.

We have thought that seventy-five or one hundred pounds per acre will pay on the compost in the row before it is ridged up, or you may sow any fertilizers we know of in the drill with the seed except Peruvian guano, which will not answer as it will destroy the germination of the seed.

As soon as the compost is shoveled in the drill, we ridge or list it up with a turn plow, and let it remain until we are nearly ready to commence planting, when we run a double mole-board plow on the middle. After this we plant, and when done, the ground is flushed all over. The width of rows depend upon the strength of soil; upon old land they are three and a half feet apart, and on the best land four and a half to five feet.

We have heard farmers say they planted injured seed, and did not know it. Therefore it will be well to examine your seed and see that they are good and sound. As for the culture of corn and cotton, we will speak of that in the next number.

DRAINAGE.

Draining is something that is better done late than never, consequently, see that your ditches are put in good repair for experience has taught us during the past summer, that our lands are not as dry as they should be.

All know full well that during the protracted drouth of last summer, it was thought that we should make very little or nothing, but what did this prove ? It showed us there is not as much rain required as we supposed to make a crop, and as a matter of course proved to us conclusively, that our lands, as a general thing are not drained as well as they should be.

We do believe with good draining and deep plowing there is but little rain required to make a good crop in Eastern Carolina.

FENCES.

If these have not been placed in good rapair, there is no time to lose until this is done, in order that the half famished stock that roams over the country is sufficiently barred out.

SWEET POTATOES.

If you have not bedded these, it is time to do so, and in order that you may have good, strong, early plants, prepare a bed by hoeing up the soil loose with a good supply of stable manure, then bed the potatoes side by side with each other, about half an inch apart; then scatter a light covering of dry stable manure over them, and cover to the depth of about three inches and let them remain in this condition until the young grass makes its appearance. Then scrape off about one inch of this soil. If it should be dry, it will be necessary to wet the bed occasionally with water, soap-suds from the wash tub will be best if convenient.

On rainy days you can grind tools, oil and repair harness, shuck and shell corn ready for the mills, and repair many farm implements as well as if the sun was shining.

STOCK.

These should, and will be attended to by every christian owner in this land, by furnishing them with good quarters and rations.

TO COTTON PLANTERS.

We feel it to be our duty to advise farmers of the importance of planting this season, a sufficiency of cereals to produce a supply for home consumption, with ordinary seasons.

In pursuing this course, there is independence as well as economy.—The farmer, be he who he may, that has to depend upon some other granary for his bread, is not and cannot feel as independent as if he had a sufficiency of his own raising.

Neither is it reasonable to suppose that the person who has to go from home to purchase, will have as good stock, to say nothing of the inconvenience under which he labors; therefore we consider it extravagance in the farmer to practice this course.

We know a good many farmers consider it economy to raise cotton with which to purchase supplies.—Do you not suppose if all cotton planters were to raise their own corn,

hay and pork, they would make more money net, besides making farming more agreeable and pleasant? Has not experience taught "cottondom" that two and a half million bales, will bring as much as five? If this be so, is it not the height of extravagance and folly to do that which will injure you?

The cotton region can raise 2,500,000 or 3,000,000 of bales, and produce a full supply of all the substantials. Let this be done, and then capital will come to the South. Beyond a doubt, there has been every exertion used to prepare and plant a heavy crop this year, and therefore, it is reasonable to suppose that the cotton crop will reach its maximum in 1870.

We honestly believe there never will be as many freedmen engaged in any subsequent year in the cultivation of cotton as there will be this, therefore we look for less, annually, until the maximum will be reached. Under this view, we think you should fill your granaries this year, and raise fine hogs, cattle and sheep, and by all means endeavor to keep as much of the cotton money at home as possible. There is no use in endeavoring to persuade yourselves that to make money is to plant all cotton.

Suppose you take A. and B., two farmers in all respects equal, and let them farm for a period of ten or more years.

A. on the principle to produce the articles of absolute necessity at home, and B. to purchase his with cotton.—A. very wisely plants a sufficiency of his farm in grain and root crops to produce an abundance, and the remainder in cotton.

Go to his farm when you may and you will find his stock in good order; his horses, mules and oxen will perform more labor and last much longer. Here is an item of no small amount in a period of ten years. He fattens pork and beef and lives independently at home.

At the expiration of each year, he sells within two-thirds as much cotton as B., and if he does not this year net as much money, he will in the course of time; besides there is a pleasure in his method to which B. is a stranger. B. plants a heavy crop each year, and the result is he is heavily taxed, spring summer and fall, preparing, cultivating and housing, and by the time he cancels all accounts, deducts wear and tear of team, and makes a liberal allowance for the perplexities of getting all the supplies for the farm, he has not netted, under the most favorable circumstances much more than A. He cannot raise as much home made fertilizers as A. for it will take him a longer time to house his crop. If you pass B.'s farm and inquire if he has any eatables to sell, the response is, no; I have to purchase. Where can I get it?

Mr. A. has corn, forage, peas, cattle, sheep, pigs and everything you may want.

A TRIP TO BAY RIVER.

Since it may interest some of our readers, we will give an outline of our trip. We traveled from Edgecombe to Washington the first day, on the road known as the Pinywoods road. After we passed Mr. Joseph Staton's, who will, at no distant day, have one of the finest

farms in North Carolina, we did not see much spirit manifested until we came near Washington.

There we had the pleasure of looking at hundreds of stocks of peanuts, upon the farm owned by Gen. Bryan Grimes. We regreted much to see the farms belonging to the estate of Mr. Ebson and Churchwell Perkins, growing up for want of labor.

From Washington, we traveled via Blunt's creek mills to Bay river. On this road from Washington to a few miles beyond the mills, we were agreeably disappointed, for we had no idea of finding such a pleasant piny-woods country, and susceptible of becoming a fine farming section, especially for cotton. We were surprised to find so little enterprise, for these people are at least one generation behind the times, there being but a small quantity of land opened, and that cultivated in the old style.

These lands are cheap, selling from $3.00 to $5.00 per acre. This is a fine section for a young man of small means to purchase a home that will pay by proper industry. These lands are sufficiently undulating to drain well. There is an abundance of marl and every facility for improvement. We are satisfied they will produce as much cotton and corn as the best piny lands in Edgecombe.

From Durham's creek, we traveled along a worthless sand ridge for several miles, until we came near Neuse river, where we filed down into the Bay river section. This is undoubtedly one of the richest soils in North Carolina, and is susceptible of being well drained, and becoming one of the best grain sections in the State.

There are large bodies of this land extending for miles in breadth and length, all swamp. This is considered by the inhabitants as their best lands. It is all underlaid with marl, from four to six feet from the surface. The sub-soil is principally clay. There is a variety of forest, except pine. The gum and poplar predominate.—Upon the ridge or upland, as it is called, are oak, hickory, beach, and as large pines as we ever saw.

These highlands are not considered of much value; the inhabitants build in the swamps in preference; they ditch out and cut down a certain plat in the fall or winter, and the next spring, in a dry season, they put fire to it and burn it over, then with a stick they punch holes in the ground, and in these holes the corn is planted.

After this, they chop the weeds that may spring up, and the crop is finished. In the course of three years the logs are all burnt at favorable seasons, between housing and planting.

For the last two years, there has been considerable cotton made upon these lands. Upon the uplands, they can succeed in producing cotton; in fact, we valued these lands as high as we did the swamps.

One thing attracted our attention, and that was, their roads were the straightest and best we ever saw in North Carolina for a low country. Their ditches were also straight, angling at no point. We saw small ditches that were cut through large trees, and the trees yet standing.—We saw no farm on Bay river that was sufficiently drained. These lands should be drained to the marl.

Dr. Redding has the prettiest farm on Bay river; he made the past year one hundred bales of cotton and an abundance of corn.

Reader, if you want to go to a place to live easy, go to Bay river, there you can get fish, oysters, deer and bears in abundance. All you have to do is to plant a small spot in corn and potatoes to have a supply,

If you desire to own one of the richest farms in this State, go there and purchase a tract of land from $4.00 to $5.00 per acre.

We found the people kind and hospitable. We hope there never will another North Carolinian leave the State in search of a new home, until they visit our Eastern brethren. They will furnish all who may desire to work, a home.

We hold there is in Eastern Carolina to-day, a sufficiency of unreclaimed lands to support five times the entire population of the State.

WILSON COUNTY.

With the farmers of this county, there seems to be a great spirit of rivalry in farming, and if they will only use the shovel and spade in cutting new and deepening their old ditches upon their farms, they will equal Edgecombe in production.

In company with Capt. Woodard, it was our pleasure to travel over nearly all that portion of the county east of the railroad, and we feel safe in the assertion that they have prepared more compost than any section we have seen, besides there is a large quantity of marl being spread upon the farms, in compost and mixed.

As for the plowing, nearly all we saw was plowed too shallow. Near Stantonsburg we saw some land broke by a large two-horse plow, which might have been broken much deeper, with an ordinary one-horse plow. We do not recollect whose farm it was, but let us suggest the propriety of using a smaller plow, as it is not the width of furrow that is required to pulverize and break the soil, but the depth. In fact, the plow that is usually made for two horses, is heavy enough for three or four, if put in heavy clay subsoils, as deep as they should be.

The one-horse Watt plow, marked A. B., made in Richmond is the best two-horse plow, we have ever experimented with, if we could keep the points from breaking; the manufacturers of this plow should look to it, that their points be put on with two bolts instead of one, or have them of metal that will not break so easily.

To be faithful to our readers in Wilson, we say ditch and plow

deeper, and your marl and compost will pay much better.

Toisnot and White Oak swamps should be drained, for in these, especially the former, are thousands of acres of swamp land that are worth $100 per acre when drained, besides this all the uplands (to say nothing of the many acres that are in cultivation of the flats of this stream) will be greatly benefitted on each side of this swamp, from one end to the other, not only in productiveness, but that section will become more healthy and pleasant.

It cannot be reasonable to suppose where there is so much perseverence in farming, and taste manifested in building residences and planting orchards, that these lands will remain undrained much longer, though the cost be several thousand dollars per mile.

Suppose it cost fifty or one hundred thousand dollars to drain these swamps, would it not be one of the best investments that could be made? Certainly it would, for then could be raised a sufficiency of grain in these swamps and tributaries to feed all of Wilson county.

The farmers on these swamps would then have an abundance of facilities of the best material at all seasons to compost for cotton. In draining this swamp (Toisnot) it would be necessary to cut one large canal in the center and one on each side of less size, parallel with the large one.

Some may think it extravagance to cut more than one, but this is not so. This swamp is long, and in many places wide, and affords a large quantity of water, therefore we think it economy to cut three canals instead of one.

In all swamps that are canalled, there are ditches (we mean where there is one canal) required which are very often cut wrong, because they are cut at intervals, direct to the hillside, when it would be much better to go to the lower end of the farm and cut from the main drain off to, or near the hillside and run parallel with the lead drain.

Farmers of Toisnot, just imagine twelve or fifteen miles of your richest land, that is almost if not a nuisance, bearing its golden fruit of fifty or one hundred bushels of corn per acre.

We had the pleasure of seeing Mr. Calvin Woodard's Chester pigs which were so much admired at the Cape Fear Agricultural Fair. We also saw some Chester pigs of the same farrow, owned by his brother, Wm. Woodard, who we should judge to be a good farmer from what we saw; but his pigs had the appearance of being diseased, and badly out of condition.

No farmer should build a house, or make other improvement without ascertaining beforehand the probable cost of the same. The preliminary counting of the expense of everything is essential to all agricultural thrift, and he who neglects it, will be apt to discover his error after it is too late.

HORTICULTURAL DEPARTMENT.

Rev. J. B. CHESHIRE, D. D., - - Editor.

HINTS FOR BEGINNERS IN GARDENING.

This is the month for gardeners to be most active and diligent in planting and sowing and cultivating if they would reap a full reward for their labors. In these operations, however, they must be regulated in some degree by the weather; by the forwardness or the backwardness of the season. No exact and positive directions can be given as to the precise time of sowing any seed, because our climate is so variable, that directions applying well to one spring, may fail to meet the conditions of another. The dampness or dryness of the soil is another item which must be taken into consideration in determining the time to sow. Each person must exercise his own "mother wit," in seed matters, and be as "weatherwise" as possible to guide him to a right conclusion.

Asparagus Beds should be attended to this month. Stir the surface well with a pronged spade and clear out all the weeds. This will greatly improve the growth of the stalks.

Cabbage should be transplanted when of sufficient size and when they begin to grow, keep them well worked. Thin out and well work beets, lettuce, radish and other early vegetables, according to directions last month.

Turnips should be sown this month, if not sown before. The amber globe turnip is one of the very best varieties for the garden. It is of quick and early growth; of beautiful shape and color, and when cooked, the golden hue of the dish, and the pleasant taste of the vegetable, make it doubly attractive on the table. Turnips when stored away for winter use, should have their tops closely broken off as this serves to make them keep better.

Tomatoes should be sowed this month. When the young plants are transplanted, they should be set in rows two feet wide, the plants 18 inches apart; or they may be set in hills three feet apart, in light warm soil, not very rich, and they should be worked deeply from time to time, until their tops meet in the rows.—To have tomatoes early, the seed should be sown in a hot bed, during the last of the winter or the first weeks of spring, or planted in a box of rich earth, kept in the house in a warm sunny place, and the plants set out in the ground prepared for them, as early as the season will allow. The yield of this plant is much improved by tying it up to stakes or to branching limbs of brush stuck in amongst the tomatoes, so that the plant, when laden with fruit may be kept from breaking and falling on the ground. The quality and size of the fruit is also improved by pinching off the ends of the shoots as soon as they put forth a few clusters of flowers. The plant is thus made more compact and self-supporting, and the fruit better developed.

Salsify—Sow the seed this month in a rich well-prepared soil, in drills 18 inches apart, and an inch deep. Cover the seed carefully and press the earth well upon them. Thin the plants to four or five inches apart, and hoe and weed often, until the plants are well grown. This plant, the root of which is like a small white parsnip, is an admirable substitute for oysters, when oysters cannot be had; and its flavor in this respect, has gained for it the name of oyster plant. When the root is washed and grated and mixed with a batter, made of milk and flour, and fried with sweet lard in small cakes, it comes as near an oyster as anything which grows out of a shell.

Parsnips—Sow the seed the last of this month, in very rich deep soil, well broken up with the spade, in drills about 18 inches apart, and an inch deep. Thin the plants to six or eight inches, and work often and deeply until the tops meet.—They may be left in the ground and used as wanted during the winter, but after they begin to grow in the spring, they should not be used, as they are then poisonous. They should be dry and stored away for winter use, and covered with a little dry sand or dirt, they keep perfectly all the winter.

Horse Radish—This fine plant for seasoning pickles, &c., is varied from the crown of the plant being cut into parts and planted, or from pieces of the roots an inch or two long.

Plant them in rich and moist soil, fron 12 to 15 inches deep, in rows two feet wide, and from six to ten inches apart in the rows. Keep them wellworked and clear, until they have started to grow well, and they will soon gain such a strong hold on the ground, as to require very persistent efforts to eradicate them. The root is fit for use whenever large enough. It is said to be a valuable remedy for neuralgia, eaten raw, or bruised and applied to the pain.

Sage may be raised from cuttings put down in the fall. But it is best raised from seed sown about this time in light soil and shallow drills. Thin out the plants to a foot apart each way. The leaves are fit to pluck when they are fully grown, but the bush should not be stripped too closely or it will die.

Parsley—Sow this month in shallow drills, 12 inches apart in light, rich soil. Thin the plants to three inches and keep clear.

Thyme—Sow in rows a foot wide upon the surface of finely prepared rich ground. When it gets large enough, transplant as many plants as you need, and keep them well worked. Sage and thyme are best kept on a border.

THE NUT BEARING TREES OF THE SOUTH.

BY PROF. S. B. BUCKLEY, AUSTIN, TEXAS.

I shall only notice some of the Genera of those which bear edible fruit, viz., the Hickories, the Walnut and the Chesnut.

The Hickories, which form the genera carya of the Botanists, have nine species, all of which are indigenous in the Southern States. The Hickories are peculiar to America, not being found native in Europe.—They form some of our largest and most stately forest trees. Their wood is tough and hard, but liable, when dead, to the attacks of insects, from which, however, it can be preserved by paint or varnish. The Hickories have a neat appearance, and possess many of the elements of beauty which render them worthy of cultivation.

Foremost among these is the Pecan, (Carya Olivæformis) which is the largest size, and largest leaves and the best nuts of all the Hickories. It has large pennate leaves, from one to nearly two feet in length, of from thirteen to fifteen large lanceolate leafets. It puts forth its leaves late in the spring and also its flowers, hence the young fruit is not liable to be killed by the frost, and it is generally a constant bearer. It thrives best in rich bottom lands, but will grow on any moderately fertile soil. It is a rapid grower in favorable situations, sending up strong stiff tough shoots to the height of five and six feet in one season. So hard and tough as to repel the attacks of the half-starved cattle in the vicinity of Austin, in the winter season. Some trees bear at the age of from six to seven years, and others require a longer time.—Much in this respect depending on soil and situation. I have young trees six and seven years old, which are from nine to twelve inches in diameter, and from twenty to twenty-five feet high, growing in the open field, with large fine spreading heads on low bodies. They are beautiful trees and now they begin to be useful for several of them began to bear fruit the past season. The nuts of the Pecan vary greatly in size, in the thickness of the shell and also in the sweetness of the kernel. I measured one which I obtained from a tree in San Saba county, in Texas, which without the husk was one and three-fourth inches long. In propagating the Pecan from the fruit, care should be taken to obtain that which has the largest size. The kernel of the Pecan is almost always good, yet I have rarely tasted some which were slightly bitter. Not far from my residence are many large Pecan trees which annually bear fruit, giving a large supply for family use.

Of all the American nuts with which I am acquainted I consider the Pecan to be the best, and much superior to the English Walnut. On the Colorado bottom near Austin, I recently counted annual rings on a Pecan which had been cut down a few hours previously. It was fifty-three years old, and thirty-two inches in diameter at stump height. I measured one ten years ago on the Santie river in South Carolina, which was thirteen feet and ten inches in circumference at three feet from the ground. This and several others of a similar size growing there had been planted by the Hugenots from nuts obtained in Louisiana. On the Brazos near the town of Richmond in the Southern part of Texas, I measured one which was sixteen feet and five inches in circumference at three feet from the ground and about one hundred feet high, an unusual height for the Pecan which is seldom more than twenty feet high.

The Pecan is found native from Texas, extending northward as far as Southern Illinois, being most abundant near the rivers which are tributary to the Mississippi. It is not indigenous in the Atlantic Seaboard States, as it grows North as far as the latitude of St. Louis, and also bears fruit in its northern localities; it can doubtless be cultivated throughout a large portion of the United States.*

I should have mentioned above that there is a Pecan tree in Nevarro county, Texas, on the Trinity river which is twenty-three feet in circumference at three feet from the ground. It has large low spreading branches. The wood of the Pecan makes the best of fuel, but is inferior in toughness, being more easily broken than that of the Shell-Bark Hickory, and several others of the Genera.—*Southern Horticulturist.*

* It can be very easily cultivated in all parts of this State, and bears very abundantly.

POPULAR PEARS--THE SECKEL.

So old and so well known a variety of the pear as this might not need, at this late day, any description of its excellencies. Everywhere popular; seeming to succeed in nearly all localities, and never failing when once in bearing, it may be considered, in one sense our very "*Patriarch*" of pears.

We do not believe one grower in a hundred knows its history, and although pomologists cannot closely trace it to its original source, yet Mr. Downing gives us the only authentic information as to its memory.

"About eighty years ago, when the late venerable Bishop White was a lad, there was a well-known sportsman and cattle dealer in Philadelphia, who was familiarly known as 'Dutch Jacob.' Every season, early in the autumn, on returning from his shooting excursions, Dutch Jacob regaled his neighbors with pears of an unusually delicious flavor, the secret of whose place of growth, however, he would never satisfy their curiosity by divulging. At length the Holland Land company, owning a considerable tract south of the city, disposed of it in parcels, and Dutch Jacob then secured the ground on which his favorite pear tree stood, a fine strip of land near the Delaware. Not long afterwards it became the farm of Mr. Seckel, who introduced this remarkable fruit to public notice, and it received his name. Afterwards the property was added to the vast estate of the late Stephen Girard. The original tree still exists, vigorous and fruitful.

"It is supposed that the tree originated from seeds dropped by Germans who emigrated from Germany and settled near Philadelphia, as it bears some affinity to the Rousselet, a well-known German pair."

The Seckel pear is small in size, but of regular form and has a peculiarity of growing in clusters at the ends of the branches, each cluster holding from two to five pears, but usually three. A well laden tree is often a great curiosity, as every available spot of surface seems to bear a cluster.

The fruit at first is but slightly colored, of a brownish green, but gradually changes into a more yellow brown, and finally puts on a lively russet-red cheek and a few small gray dots.

The *stem* is about half-inch long, moderately stout, inserted in a small narrow cavity, highest on one side. *Calyx*, small, open, with short, stiff, incurved segments. *Basin*, shallow; *core*, small; *seeds*, broad, ovate.

The fruit is unsurpassed in flavor, and at various Pomological Conventions, in England and America, it has been declared the most exquisitely flavored of any variety known on both continents. The flesh in texture is yellowish white, juicy, very sugary, melting, spicy and aromatic.

When we add to this that it is one of the healthiest and hardiest growers of all pear trees we possess, forming a fine, compact, symmetrical head, and well adapted to culture either as a dwarf or as a standard, and on both equally certain, we have a variety of inestimable value in our horticultural collections.

Cultivators should take due notice that it is *late in coming into bearing*.—We have seen large trees which did not commence bearing until their tenth year, but when once in productive condition, its luxuriance is fairly astonishing.

It will bear more manure than any other variety we know, and, in fact, demands it constantly in order to give large and handsome fruit.—*Horticulturist.*

HANGING BASKETS.

A room, whose windows are filled with plants, flowers, and hanging baskets, has a *living charm* in it for old and young. Some very pretty little ornaments can be made at but very slight expense, and produce an exquisite effect. For instance, the *sweet potato vine*. A tuber planted in a hanging basket, covered with earth and moistened slightly, at occasional intervals, will commence growth and throw out its long stem, and twine around the side arms of the basket, adorning it with one of the prettiest of all climbing vines. A writer in *Hearth and Home* recommends another simple basket.

"We have seen one made of cocoa-nut shell, with the upper section nearly sawed off and scarlet cords attached, planted with Moneyworth.—Its trailing stems, extending half way down the window, filled with its bright golden blossoms, might have graced a Fifth Avenue drawing-room, so exquisite were its proportions, as bright in coloring. For larger baskets, buy, at the woodenware shops, a wooden bowl twelve or sixteen inches in diameter. Bore three holes at regular distances for the cords to support it. Then ornament with rosettes made of halves of the coffee-bean not roasted, grains of rice and small black soup beans. Any girl of common ingenuity can make a pretty one with these materials. Attach them to the bowl with common glue dissolved in water or whisky—if dissolved in the latter it does not set or harden until used.

"When it has dried, varnish with black varnish, which is readily procured at little expense at any paint shop or carriage manufactory.

"When that is dry ornament the edges with all-spice berries strung on wire. Now attach the cords, and you have as handsome a basket as the shops can furnish, and the expense is very small. A wooden bowl can be ornamented with the scales of the long pine cones. Each scale can be

nailed on with upholster's tacks, first boring the holes, and after the bowl is covered, varnish with brown varnish. Even the varnish can be made at home, if one chooses. Buy two or three ounces of asphaltum and dissolve it in turpentine or kerosene, making it lighter or darker as one desires, by adding more or less of the asphaltum."—*Horticulturist.*

THE DORCHESTER BLACKBERRY.

A correspondent of the Iowa *Homestead*, living at Eldora, Iowa, is very well pleased with its cultivation.

"The first season's growth gave some protection during the winter.—The next winter, which was that of 1867 and 1868, I gave them no protection whatever, and they came out sound and healthy and bore a full crop the past season, fully verifying all the good qualities and noble characteristics ascribed to it. Fruit large, oblong, oval, slightly pointed, black, sweet, rich and excellent, leaves broad, oval, do not sunburn, ripens early; berries quite firm for good market variety."

Editorial Note.—The Dorchester is the earliest of all varieties we have cultivated, sometimes ripening even before the Wilson. Unless grown on very rich land, it does not grow to a large size, and does not produce a large crop. If well treated it is very profitable. As a family fruit it is excellent, being of an exquisite flavor and very small core.—*Horticulturist.*

THE FLOWER GARDEN AND LAWN.

In all that relates to a flower-garden or lawn, order and neatness are indispensable. At this season, special attention should be paid to these qualities. In making your arrangements for your pleasure-grounds, allow abundance of room for the lawn. Of all arrangements for ornamental effect, a clean, smooth lawn possesses a beauty almost unequaled by even the most brilliant flowers and shrubs which are interspersed here and there. The lawn should have a dressing of good rich soil, or compost, before the middle of March, and grass-seed should be sown during the first week of April, just before a rain. Sow the seeds over the ground, rake in with an iron rake, and roll immediately afterward when the ground is dry, for if wet, the soil and seeds will adhere to the roller. From a quarter to half an inch is not too thick to cover the lawn with compost.—*Selected.*

FRENCH METHOD OF RAISING TOMATOES.

As soon as a cluster of flowers are visible, the stem is topped down to the cluster, so that the flowers terminate the stem. The effect is that the sap is immediately impelled into the two buds next below the cluster, which soon push strongly and produce another cluster of flowers each. When these are visible, the branch to which they belong is also topped down to their level, and this is done successively. By this means the plants become stout dwarf bushes, not above eighteen inches high. In order to prevent their falling over, sticks or strings are stretched horizontally along the rows, so as to keep the plants erect. In addition to this, all the laterals that have no flowers, and after the fifth topping, all laterals whatsoever, are nipped off. In this way the ripe sap is directed into the fruit, which acquires a beauty, size and excellence unattained by other means.—*Horticulturist.*

PLANTING TREES.

Don't set out too many fruit trees in the garden; leave a space for vegetables, to which the sun will have free access, when the trees have attained full growth. You will always need fresh vegetables as well as nice fruit. Many a man is now sorry that he set so many trees in his garden. When he planted them they were small, and took up very little space, and he did not reflect that in a few years they would extend their arms, and clasp hands shading every foot of his ground.

Shade and ornamental trees are often set too close to the house. The limbs extend and chafe the windows and the paint, or if they are cut off, the symmetry of the trees is destroyed. Evergreens, almost without exception, are set too near the house, so that, after a few years growth, their removal or destruction becomes necessary.

Trees which cast their shadows upon the house cause dampness in the room, and render them unhealthy. Better have no trees, than exclude the health-giving rays of the glorious sun.

THE PEACH ORCHARDS OF CALIFORNIA.

The State of California has 800,000 peach trees, or about five to every voter—enough to produce more than one hundred pounds annually for every person. The figures are large, but they are official, and are supposed to be correct. Santa Clara county is down for 70,000 trees, Sacramento for 74,000, El Dorado for 56,000, Sonoma for 52,000, San Joaquin for 45,000, Butte for 40,000, and Napa, Placer, Tuolumme, Colusa, Amador, Yolo and Yuba range between twenty and thirty thousand each. Our climate and soil are well adapted to the peach, and the fruit will, in time, probably be cultivated on a large scale in this State for drying and curing. —*San Francisco Alta California.*

EARLY TOMATOES.

Early tomatoes are ceatainly the most profitable, but for family and general garden use they are not the most desirable. The later tomatoes are generally larger, finer quality, and more productive. We observe this season quite a number of new varieties offered, and some contain extraordinary merit, as for instance, the Gen. Grant and the *Trophy*, the latter being of tremendous size and fine solid flesh. But for ordinary culture it is very doubtful whether anything is better than the Early Smooth Red, for market; or the Tilden and Cook's Favorite, which have been so well and favorably known for a long time. Try the new ones, but do not forsake the old kinds.—*Horticulturist.*

GROWING ASPARAGUS.

The introduction of the new variety, *Conover's Colossal*, is destined to work a radical change in asparagus culture for the future. Hitherto gardeners have been accustomed to plant in rows two feet apart, with plants one foot in the rows. The new variety, Conover's Colossal, should be planted in rows four feet apart and three feet in rows, thus practically introducing the system of *hills* instead of rows, and reducing the culture to about the same as for corn, until the roots have spread and filled the whole ground, and the stools have become

large enough to occupy the entire space. The new method is certainly the most economical in manure and labor, and original cost of plants.—*Horticulturist.*

THE POULTRY HOUSE.

THE CRESTED DUCK.

This is a beautiful and ornamental variety. They are of all colors, having in fact no other common features. We have had them pure white, black, and mixed white and black, with large turbans, or topknots. The whites are considered the most beautiful, as they have yellow bills and legs. We are not advised of the origin of this variety. Mr. Brent regards them as probable descendants of the Australian tufted ducks, of which more than one variety is said to exists in that country. Many may have thus been bred; but the accidental appearance of the tuft on the goose, of which bird we have no rumor even of any variety thus uniformly decorated, suggests the probability of the duck having obtained its head-dress in a similar accidental manner. The top-knot of the latter, however, is in general proportionably larger, and more spherical than that of any geese we have ever yet seen; sometimes though placed on the back of the head, even rivaling in form that of the Polish hen.

Main speaks of the "Red-crested duck," from New Zealand, but which is not common there. A red crest grows on the head; a very glossy black-gray is predominant on the back, and a deep grayish soot-color on the belly; the bill and legs are lead color, the irides golden.

Latham also speaks of the Crested duck and says, "This inhabitant of the extremity of America is of the size of the wild duck, but is much longer, for it measures twenty-five inches in length; a tuft adorns its head; a stray-yellow, mixed with rusty-colored spots, is spread over the throat and front of the neck; the wing speculum blue beneath, edged with white; the bill, wing, and tail are black; irides red, and all the rest of the body ashy-gray."

BLACK BANTAMS.

The Bantam is the smallest specimen of fowl, and may with propriety be called the pigmy of the gallinaceous tribe. Diminutive size and bold carriage are important points in all Bantams. These beautiful emblems of pride and consequence, are peculiarly fancy fowls; they have been accused of not beig a usefnl kind, as of course there is little meat in a fowl which, when full grown, should weigh, the cock about one pound, the hen less—the eggs being small in proportion; but their eggs are delicacies which would tempt almost any invalid. They must be considered more an object of curiosity than utility, and of course must expect to be viewed with no peculiar favor in this country except as "pets."

Though extremely small in size, the Bantam cock is elegantly formed, and remarkable for his grotesque figure, his courageous and passionate temper, his amusing pompousness of manner, his overweening assumption and arrogance; and his propensity to fight, and force every rival to "turn tail," has caused him many difficulties. He is a beautiful example of a

great soul in a small body. He will attack a Cochin or Brahma ten times his own weight. "His full rose-combe, and deep depending wattles are plump and red; but this disproportionate size affords a most unfortunate hold for the beak of his adversary; but he cares not for that, a little glory is worth a good deal of pecking and pinching, and it is not a slight punishment, nor a merely occasional infliction of it, that will make him give in. The great hens, too, look down upon him on a first introduction, though they afterwards find out that they might as well have received him in a more feminine manner."

He is a pleasing little fellow, though an impudent consequential atom.

SPANGLED POLAND FOWLS.

"The spangled Poland are a bird of extraordinary beauty, extremely scarce, and very diffiult to be procured. This fowl presents a symmetrical and regular combination of the following colors, viz: A bright orange, a clear white, a brilliant green, and a jetty black, softened down with a rich and pure brown, every feather being tipped with white, so as to produce the effect whence has been derived the term spangled. The color of the hen is a prevalent golden yellow, with white spangles, like the cock. In the cock, the thighs are black, and are, likewise, though in a less degree, marked and spangled with black, and golden yellow. The hinder end of the body is furnished with green and orange-brown hackles, and the tail is carried well up. The flesh of these birds is of good quality, and they are very prolific. They also fatten quickly, and have, by some, been compared to the Dorking for similarity of flesh, and other excellencies of quality. I however, must unequivocally award the preference to the latter bird, independent of the enhanced price occasioned by the far greater scarcity of the former.

Geese.—The bill and feet of a young one will be yellow, and there will be but few hairs upon them; if old they will be red; if fresh, the feet will be pliable; if stale, dry and stiff. Geese are called green till three or four months old. Green geese should be scalded; a stubble-goose should be picked dry.

Good Layers.—To make your fowls lay well in cold weather keep them warmly housed. Do not let them out in cold rains and sleet. Feed them regularly—give them cooked corn meal at noon, and always have water within their reach. Fresh meat or scraps should be given weekly.

To Make a Hen Sit in a Strange Nest.—A broody hen may be made to sit in a strange place by being put on her eggs at night, in the dark, and shut down closely. After a day or two she will keep to them.

Poultry in Small Enclosures.—You can keep a score of hens and rear chickens from them on five hundred square yards. If it is not all grass you will have to supply them green food. They must have green food and dust.

Note.—On page 372, third paragraph, 6th line, for "Maximum" read "Minimum."

Advertising Department.

R. S. MYERS. T. H. B. MYERS.

JOHN MYERS' SONS,

COMMISSION MERCHANTS

COTTON FACTORS, AND

RECEIVING AND FORWARDING AGENTS,

WASHINGTON, N. C.

A LARGE ASSORTMENT OF

GROCERIES AND PROVISIONS

CONSTANTLY ON HAND, WHICH WILL BE

SOLD AT A SMALL ADVANCE ON NEW YORK PRICES.

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STATON, BENNETT & CO.,

COTTON FACTORS AND

COMMISSION MERCHANTS,

McPHAIL'S WHARF, NORFOLK, VA.

THIS HOUSE DOES STRICTLY A

COMMISSION BUSINESS.

IT NEVER HAS NOR NEVER WILL DEPART FROM THIS PRINCIPLE.

From the fact that Norfolk is now in steam communication with Liverpool, and from the high prices obtained for produce in its markets during the past two years is sufficient evidence, we think, to satisfy the producer as to where his interest lies. It is a duty we owe ourselves to build up our Southern seaports; but it can never be done so long as the farmer continues to ship his cotton to the North. No. 1-1

JOS. W. JENKINS, R. H. PENDER,
Late Tarboro, N. C.

JOS. W. JENKINS & CO.,

COTTON FACTORS

AND COMMISSION MERCHANTS,

29 SOUTH STREET,

BALTIMORE.

P. O. BOX 383.

LIBERAL CASH ADVANCES MADE ON CONSIGNMENTS,

Orders for Supplies Promptly Filled.

NAVASSA

AMMONIATED SOLUBLE

PHOSPHATE,

MANUFACTURED BY THE

NAVASSA GUANO COMPANY,

OF

WILMINGTON, N. C.,

IN BAGS OR BARRELS.

This Fertilizer is prepared with the utmost care, and contains every constituent desirable for any crop to which it may be applied. It is especially adapted to the growth of

COTTON, CORN, CEREALS,

AND ALL KINDS OF

FRUITS AND VEGETABLES.

It is manufactured of the same materials from which the celebrated

Ptapsco Guano Co's Phosphate,

is prepared, and reference is made to that Company (65 South street, Baltimore), for its efficiency, quality and uniformity.

R. R. BRIDGERS, President.
DONALD MACRAE,
Treasurer and Secretary,
Wilmington, N. C.
MARCUS J. BATTLE, Agent,
Whitaker's P. O., N. C.

fe 1—3m

EDGECOMBE FOUNDRY

AND

AGRICULTURAL WORKS,

TARBORO, N. C.,

A. J. HINES & CO.

We manufacture Carts and Wagons to order, and every kind of Agricultural Implement suited to the cultivation of Eastern and Middle Carolina.

WORKS AT THE RAILROAD DEPOT.
ja 1—1y FS&WC

Wilson Collegiate Seminary

FOR YOUNG LADIES.

AT WILSON, N. C.

On the Wilmington and Weldon Railroad.
For particular information, address
ja1-1y MESSRS. HOOPER, Principals.

BROWN'S

Cotton Planter,

PRICE, $20.

WAGONER & MATHEWS'

Cotton Planter and

GUANO DISTRIBUTOR,

Price, $40.

For sale by
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No.11-1t Wilmington, N. C.

A. WHITEHEAD & SONS.

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AND

SEED WAREHOUSE,

NO 10 BOLLINGBROOK STREET,

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INVITE THE ATTENTION OF FARMers of North Carolina and South-Side Virginia to their stock of Implements in part as follows: Dixie Plows, Murfee's sub-soil Plows, Double Shovel Plows, Harrows, Cultivators, Cast Steel Hoes, Rakes, &c.

We are agents for the Union Washing Machines, Allen's Lawn Mower, and Wood's Reaping and Mowing Machines.

We have also a large lot of Seed Potatoes, Early Rose, Early Goodrich, and Michigan White Sprouts.

We send seeds by mail. Liberal discount to the trade. fe 22—F&C 3m

Mr. and Mrs. Owens' School,

TARBORO, N. C.

The FIRST SESSION of the year begins with January and ends with May; the SECOND SESSION begins with June and ends in December.

VACATION—AUGUST AND SEPTEMBER.
Tarboro, N. C. No.2-1y

G. H. Brown & Co.,

FORWARDING AND

COMMISSION MERCHANTS,

No.1-1y WASHINGTON, N. C.

DR. J. A. FUQUA,

DENTIST.

will be in his office at Tarboro from the 1st until the 15th of every month, and in his office at Wilson the remainder of the time.
ja 15—tf

The Farmer's Friend.

THORN'S COTTON PLANTER.

THIS PLANTER was invented in April last by T. T. & G. T. THORNE of Edgecombe. It has given entire satisfaction to those who have used it, and will plant from a peck to six bushels per acre, by a simple and easy regulation of the wheel.

It opens the furrow, drops and covers the seed at the same time, to any required depth, and the seed require no preparation after leaving the gin. It is perfectly free and regular in its distribution, and never clogs. Runs very light, follows the ridge, and is easily handled, requiring little or no exertion from the horse or the holder.

We hope the planters of Edgecombe and adjoining counties will give our machine a trial. It will be manufactured at home, under our own supervision, of the best workmanship and material.

SAMPLE MACHINES

Will soon be on exhibition at Wilson, Rocky Mount, Greenville, Battleboro, Enfield and other places. A sample is now on exhibition at the store of Messrs. PENDER & JENKINS, Tarboro, who will take pleasure in showing the machine, and explaining its operations.

Persons desiring to test this Cotton Planter, can see it in operation on our farm at any time, where we have prepared ground expressly to exhibit it, or we will take the Planter to the farm of any one not too remote from us.

CERTIFICATE.

The following well known planters of Edgecombe planted their crops of last year with the "Farmer's Friend," obtained the best stand they ever had, and found their crop easier of cultivation from being so regularly planted.

EDGECOMBE COUNTY.

We, the undersigned, have used the "FARMERS' FRIEND," and find it superior to any we ever saw—giving entire satisfaction.

J. M. MAYO,
J. C. KNIGHT,
C. F. PITTMAN,
A. JONES.

PRICE, $20.

Planters of Edgecombe and adjoining counties wishing this machine, will apply to D. PENDER, Tarboro, N. C., or

T. T. & G. T. THORNE,
Whitaker's, N. C.

No.9-tf

COCKADE MARBLE WORKS,

CORNER SYCAMORE AND FRANKLIN STS.,

PETERSBURG, VA.

MONUMENTS, CENOTAPHS HEAD AND FOOT STONES, AND GRAVE STONES of every description, and of FINEST MARBLE AND SUPERIOR WORKMANSHIP, always on hand and made to order BELOW NORTHERN PRICES.

SATISFACTION GUARANTEED.

CHAS. M. WALSH, Proprietor.

nov 13 1y

GILLIAM & DUNLOP,

IRON AND STEEL WAREHOUSE,

121 SYCAMORE STREET, PETERSBURG, VA.

Keep constantly on hand a full assortment of IRON AND STEEL.

They are agents for the sale of the celebrated ARROW COTTON TIE.

FAIRBANKS' SCALES, (at N. Y. prices,)

OILS OF ALL KINDS at wholesale, and AGRICULTURAL IMPLEMENTS of all descriptions. nov 13—1y

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JORDAN & CARR,

(Successors to George B. Jones & Co.,)

WHOLESALE AND RETAIL DRUGGISTS,

Sycamore, corner Washington street,

PETERSBURG, VA.

INVITE ATTENTION TO THEIR LARGE and well selected stock of Drugs, Medicines, Paints, Oils, Varnishes, Dye-Stuffs, Window Glass, Brushes, Combs, Fancy and Toilet Articles, Perfumery, Soaps, Tobacco and Snuff, together with every article usually kept by an extensive first-class house.

Merchants, Physicians and others are earnestly invited to examine their stock and prices. ja4tc

RO. A. MARTIN. RO. R. HILL.

ROBT. A. MARTIN & CO.,

GROCERS AND COMMIS'N MERCHANTS,

129 SYCAMORE STREET,

PETERSRURG, VA.

Strict personal attention given to the sale of Cotton, Tobacco, Wheat, &c. Orders for goods filled at reasonable prices for cash or short time to responsible punctual customers.

nov 13 1y

McILWAINE & CO.,

WHOLESALE GROCERS AND

COMMISS'N MERCHANTS,

79, 81 & 83 SYCAMORE STREET,

PETERSBURG, VA.

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FRANK POTTS,
S. S. BRIDGERS,
E. GRAHAM.

nov 13

C. C. VINCENT,

MANUFACTURER OF

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PLUMBING, ROOFING, &C., &C.

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BURTON BROTHERS,

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COMMISS'N MERCHANTS,

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Post Office box, 444.

Also, agents for the sale of Hope Mills and Basin Mills Flour, at millers' lowest cash prices. nov 13—1y

BRANCH & HERBERT,

GENERAL COMMISSION MERCHANTS,

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PETERSBURG, VA.

Consignments of COTTON, TOBACCO, WHEAT, CORN, ROSIN and PRODUCE generally solicited, on which cash advancements can be made. GROCERIES and every other kind of Goods will be furnished at lowest market rates. Bags furnished on usual terms for grain.

SPRING, 1870.

For Cotton and Tobacco.

ONE TON OF WHANN'S, COSTING $60, increases the crop as much as one laborer. This is the experience of all the Georgia planters for several years past.

It hastens the crop to maturity two or three weeks earlier.

It improves the land permanently.

It has been extensively used for Cotton and Tobacco.

WHANN'S RAW-BONE

SUPER-PHOSPHATE,

A STANDARD

FERTILIZER.

KNOWN AND USED ALL THROUGH THE MIDDLE AND SOUTHERN STATES.

PETERSBURG, VA., February, 1870.

We have been selling WHANN'S RAW BONE SUPER-PHOSPHATE OF LIME, for five years past, and it has in every instance that we have heard of, given entire satisfaction. We annex the certificates of parties who have purchased it exclusively for four years, and they testify that it has produced fine crops, and improved their land greatly. We feel convinced that from its use farmers will derive as much profit in the product of a crop, and in permanent improvement to their land, as they can from any article they can use, and at a very moderate cost.

It has been extensively used in this State and North Carolina, and we are prepared to give the best reference in almost every neighborhood. We call your attention to a few certificates, and invite you to call on us before purchasing.

ROWLETT, TANNOR & CO.

AUGUSTA, GA., Feb. 5, 1870.

Messrs. Rowlett, Tannor & Co., Petersburg, Va.:

Gentlemen—Your favor of the 29th ult., to hand. In reply to your inquiries concerning Whann's Raw Bone Super-Phosphate of Lime, we would say that we have no hesitation in recommending it as a fertilizer for all crops. We believe that it is superior to many, and excelled by none.

It was used extensively on cotton throughout this State last season, and gave universal satisfaction. From all who have used it we receive most flattering testimonials as to its value as a fertilizer.

A very material advantage which it possesses is in causing cotton to mature early, before frost sets in. This, in a northern latitude—such as North Carolina and Virginia, where the seasons are necessarily short—is of self-evident importance to every planter.

We ordered 1,800 tons from Walton, Whann & Co. this season, the greater part of which has been sold already, and we doubt not but we will be able to sell considerably more than this before it closes.

In conclusion, we again assure you that we have no hesitation, whatever, in recommending it as a fertllizer for cotton, feeling confident it will prove itself as such to all who use it. We are, yours very truly,

CLANGHORN, HERRING & CO.

BRUNSWICK CO., VA.

Messrs. Rowlett, Tannor & Co.:

I used last spring, on my tobacco crop, about the same money value of Whann's Phosphate and Peruvian, and the land about the same. Up to cutting and harvesting the crop I could see no difference in the tobacco. In a small bottom, where there was more moisture than in other parts of the lot, where Whann's Phosphate was used, the tobacco was as good as the land could bring under the circumstances.

J. H. LEWIS.

LAWRENCEVILLE, VA., July 26, 1869.

Messrs. Rowlett, Tannor & Co.:

Gentlemen—This is to certify that I have used Whann's Raw Bone Super-Phosphate of Lime for the last two years on tobacco and wheat and find it *fully equal to Peruvian Guano on the crops and far superior in the growth of clover and vegetation that followed.*

Yours, very truly,

TURNER SAUNDERS.

DINWIDDIE CO., VA., Aug. 11, 1869.

Messrs. Rowlett, Tannor & Co.:

Gentlemen—At your solicitation, I bought of you, last spring, Whann's Raw Bone Super-Phosphate of Lime, which I applied on my tobacco at the rate of 200 lbs. to the acre. So far as I can judge now, I consider it equal to anything I have ever used, and *side by side it is superior to Peruvian Guano*, at this time. I used it on wheat last fall, and was very much pleased with the result. It produced a good crop, and the vegetation shows that *it has improved the land.*

ROBT. C. RIVES.

JOS. W. JENKINS, R. H. PENDER.

JOS. W. JENKINS & CO.,

29 *SOUTH STREET,*

BALTIMORE, MD.,

COTTON FACTORS

AND

COMMISSION MERCHANTS.

We have secured the services of Mr. C. C. LANIER, of Tarboro, who will represent us in the Eastern counties of Carolina.

Reliable and responsible farmers will be aided by advances of fertilizers and farm supplies generally, at lowest market prices.

We attend to the purchase and shipment of any article wanted by our friends in the country.

Our agent, Mr. Lanier, may be addressed or applied to in person at Tarboro.

ja 1—1yF&WC

Shell Lime.

We are prepared to furnish to North Carolina farmers on any of the rivers cargoes of not less than

1,000 BUSHELS SHELL LIME!

Price at kilns, 6 cents per bushel, slacked 10 cents unslacked.

BOWEN & MERCER'S

SUPER - PHOSPHATE,

Equal to any in the market,

PRICE $52 PER TON.

REFINED POUDRETTE!

GROUND BONES,

MEAT AND BONE GUANO, &c.

BOWEN & MERCER,

No.8-4m Exchange Place, Baltimore, Md

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REAL ESTATE AND FINANCIAL AGENTS,

BUY AND SELL SOUTHERN LANDS

Negotiate Loans on Southern Securities, and encourage Emigration to the South.

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OFFICES—48 Broad street, New York, and Front street, Wilmington, N. C. No.1-1y

Paints for Farmers & Others.

The Grafton Mineral Paint Co. are now manufacturing the Best, Cheapest and most Durable Paint in use; two coats well put on, mixed with pure Linseed Oil, will last 10 or 15 years; it is of a light brown or beautiful chocolate color, and can be changed to green, lead, stone, drab, olive or cream, to suit the taste of the consumer. It is valuable for Houses, Barns, Fences, Carriage and Car Makers, Pails and Woodenware, Agricultural Implements, Canal Boats, Vessels and Ships' Bottoms, Canvas, Metal and Shingle Roofs (it being Fire and Water Proof,) Floor Oil Cloths (one Manufacturer having used 5,000 bbls. the past year,) and as a paint for any purpose, is unsurpassed for body, durability, elasticity and adhesiveness. Price $6 per bbl. of 300 lbs., which will supply a farmer for years to come. Warranted in all cases as above. Send for a circular which gives full particulars. None genuine unless branded in a trade mark, Grafton Mineral Paint. Persons can order the Paint and remit the money on receipt of the goods. Address

DANIEL BIDWELL,

ja1-6mF&WC 254 Pearl st., New York.

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MAIN STREET,

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WASHINGTON, N. C.

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COTTON and OTHER PRODUCE sold at owners' option in Norfolk or New York, charg- only one commission. No.8-1y

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MANUFACTURERS OF FINE

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A LARGE STOCK OF FINE, LIGHT

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VALUABLE LANDS

FOR SALE IN

Lenoir & Craven Counties.

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The large and valuable plantation known as

PALMYRA,

Two and a half miles from La Grange, (late Mosely Hall,) on the Atlantic and North Carolina Rail-Road, sometimes called the Nathan Blount farm, is for sale. The tract contains fourteen hundred and forty (1440) acres, one half cleared and under cultivation, with good buildings for farm laborers, barns, stables, gin-house, cotton press, &c.

These lands are remarkably well adapted to growing cotton, corn, oats, and other small grain. The uncleared land is susceptible of the most thorough drainage and cultivation.

This is one of the best and most eligible farms in Lenoir county, has readily rented for one third of everything produced, and will yield, under favorable seasons and fair cultivation, about four thousand ($4,000) dollars income from rents.

———:o:———

Also, another farm in Craven county, called

TURKEY TRAPS,

Within five miles of the Atlantic Rail-Road, two miles from Neuse river, (navigable), sixteen miles below Kinston, and sixteen miles above New Berne, adjoining the lands of Dr. R. G. Cobb and others.

The tract contains one thousand acres, of which a four horse farm is cleared and under cultivation, and as much more ditched and partially cleared.

MARL

Is found in great abundance on these lands, being thrown up out of the ditches three feet from the surface.

This is a valuable tract of land, and will be sold for much less than its estimated value, the owner having more land than he can manage under the changed system of labor.

For further particulars apply to or address

WILLIAM A. BLOUNT,
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Or Editors of "Reconstructed Farmer," Tarboro.